NATIONAL HIGHWAY AUTHORITY
MINISTRY OF COMMUNICATIONS
GOVERNMENT OF PAKISTAN
ISLAMABAD

COMPOSITE SCHEDULE OF RATES

JANUARY 2009

(SIND)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

FOREWARD

Following the increases in prices of materials and labour in the year 2008, the revision / updation of CSR has been carried out. In the year 2008 we have seen the prices of steel / diesel / bitumen go up considerably and towards the end of year have come down. Analysts are still uncertain with the prices in the year 2009. For the year 2009, we have carried out a general revision of all prices upto January 2009 in consultation with leading manufacturer's, supplier, and specialist contractors.

In the absence of standard fix formula the best engineering knowledge and rate analysis practices are used to develop these rates. The variation in the proposed rates is anticipated in certain cases, which may be due to varying degrees / levels of productivity and price differences of various inputs at the regional level.

The rates, prices and outputs included in the resources and unit cost calculations, including allowances for wastage, normal productivity and efficiency are based for roadwork and bridge projects being carried out by NHA. The unit rates are average unit rates for a particular district and not project specific. The market can change very rapidly, which would obviously have an impact on the unit rates.

It must be understood that main objective of the CSR is to provide a realistic reference base for preparing Cost Estimates / PC-I and Evaluation of Bids, for NHA projects.

My gratitude to The Chairman NHA, Member (Finance), Member (Operations), Member (Construction), Member (Motorway) and Member (Planning) without whose guidance and support it would have been difficult to develop this Document.

In the end, my appreciation to my team for all the possible technical and professional efforts to produce Revised Composite Schedule of Rates 2009.

It is hoped that the CSR 2009, would serve as a Basic Engineer's Estimate Reference Document for National Highway Authority, various Government Departments and the construction industry in general.

Whilst all efforts are made to ensure the accuracy of the data and information used in updating the CSR , neither NHA or M/s Shabir Associates can in any way accept liability for loss of any kind resulting from the use of CSR made by any person, institution, company, department etc.

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1. General

For many years National Highway Authority has been compiling / updating the Composite Schedule of Rates for use in the Civil Engineering Industry. The Civil Engineering Industry uses this Schedule of Rates for pricing work by the application of unit rates to the quantities measured from the designer's drawings. The main objective of the CSR is to provide a realistic reference base for cost estimates. One has to understand no two projects are the same, there are variables which effect the price of the project i.e., the volume of work below ground, embankment height, cut & fill, increased exposure to weather, and the tremendous variety of the projects, in terms of type, complexity and scale makes the straight forward use of unit rates less reliable. This uncertainty is compounded by the lower number of bill items generated in Civil Engineering Projects as compared to Building Works so that the precise nature of work is less apparent from bill descriptions and the statistical effect of 'swings and roundabout' has less scope to average out extremes of pricing.

To prepare a price for a Civil Engineering project, then, it is necessary to have regard to the method to be adopted in executing the work, draw up a detailed programme and then cost out the resources necessary to prosecute the chosen method. The first part of this process is the province of construction planner, there has been a tendency to postpone detailed estimating until the tendering stage itself, with the employer relying upto that point upon an estimate prepared on a 'broad brush' basis.

There is increasing growing pressure on the part of project sponsors for an improvement to budgetary advice, so that a decision to commit expenditure to a particular project is taken on firmer grounds. The absence of detailed price method during the pre-contract phase also inhibits the accurate costing of alternative designs and regular cost checking to ensure that the design is being developed within the employer's budget. The CSR gives unit rates for use when quantities can be taken from available drawings. To take some note of the range of unit rates that might apply to an item, the rates themselves are in some cases related to working method – for example by identifying the different types of plant that would suit varying circumstances. Nonetheless, it would be folly to propose that all types of Civil Engineering work could be covered by the use of CSR. While developing these unit rates, we had in mind the type and scale of work to be commissioned by NHA.

The CSR does embrace the great majority of work undertaken by NHA. Although almost all projects will have individual features that require careful attention in pricing, there will be some projects that are so specialist that they will not confirm to standard pricing information at all. But for most projects, within the range of work covered, this CSR should provide a firm foundation for:

Preparing Project Cost Estimate and PC-1

Evaluating Tender / Bids

Evaluating Claims and Variation Order

Arbitration Matters

In order to prepare an authentic Composite Schedule of Rates and to keep it effective, the basic requirements are as under:

- Collection of first hand, prudent and legitimate information for inputs (Manpower, Material & Equipment) in the rate analysis
- Merging the above information in proper proportion according to Design Specifications and Constructional requirements to create the rate of a work item
- Updating the data inputs every year or from time to time, to revalidate the item rates

2. GENERAL METHODOLOGY:

a. Composite Schedule of Rates was originally published in the year 1991 and subsequent revisions were carried out in 1995, 2000, 2005, 2006 and 2008. There are total of 91 Districts considered and are given numbers in Alphabetical order and their Province wise breakdown as under:

Province	No of Districts
Punjab	34
Sind	16
NWFP	21
Balochistan	20

Specifications and Methodology for Construction items have been adopted as given in General Specification of National Highway Authority (1998). Items of work for construction have been given the same numbers as appearing in the General Specifications of National Highway Authority.

b. These rates are based on the existing formulae and efficiency levels used in the preparation of CSR 2005, 2006 and 2008 with some modifications.

c. The rates analysis of individual items of CSR 2009 consists of four basic inputs, which have been assigned the same code numbers as in the previous Composite Schedule of Rates.

i. Manpower code starting from 1001 onwards

ii. Material code starting from 2001 onwards

iii. Equipment code starting from 3001 onwards

iv. Overheads, Profits & Preliminaries

d. For the preparation of rates following documents have been referred:

   i. General Specifications 1998

   ii. NHA Composite Schedule of Rates 2005, 2006 & 2008 and its basic data

   iii. Statistical Bulletins by Federal Bureau of Statistics

   iv. Current Market rates study

   Code list of Manpower, Material and Equipment appear at the end of the chapter for the convenience of the users.

2.1 MANPOWER:

a. **Allocation of Code Numbers:**

   Costs of manpower engaged on Plant & Equipment have been included in rental charges of Plant & Equipment and only site supervisory staff have been considered under the heading of Manpower. Code numbers are allocated accordingly to such manpower that is directly charged to the items of work. Manpower cost for top supervision, administration and other non-productive works of support services have been considered under overhead charges.

b. **Formulation of Rates:**

   Manpower basic rates collected from districts have been first scrutinized, to eliminate irrational information and following overheads are applied to include fringe benefits and other charges:

   i. Social Security Payment

   ii. E.O.B.I. Payment

   iii. Education Cess Payment

   iv. Yearly Leave Salary (Earned, casual and sick)

   v. Bonus (Compulsory)

   vi. Provident Fund (Contribution of Employer) or Gratuity

   vii. Mess Expenses (Site Staff)

   viii. Entertainment Allowance (Provisional)

   ix. Group Life Insurance

   x. Site Staff Accommodation

   After including above overheads, manpower rates for each of the 91 district have been calculated and separate records developed for use by the Computer Program.

2.2 CONSTRUCTION MATERIAL:

a. Allocation of Code Numbers to Materials:

List of materials required for road construction has been first prepared from the construction items appearing in the General Specifications of National Highway Authority. After arranging the construction material list in order, code numbers have been allocated.

b. Formulation of Rates:

Considering the location of each district, Engineers decided the most appropriate source of construction materials for all the code numbers. The cost of material at source has been established from field data and transportation rates calculated, to arrive at the landed cost of material at the district headquarters.

c. Cost of Material

In order to arrive at a "Material at sources" rate, following considerations have been made.

i. Material royalty at quarry (actual or estimated)

ii. Cost of Preparation of material

iii. Unauthorized local charges in the province of Balochistan and Sind

iv. Loading of material in truck / trailer etc

d. Cost of Transportation

Transportation charges have been taken as actual, where local transporters are available. However, in some districts where local transporters rates are not quoted, transportation charges graphs have been used.

In case of quarry materials, the source of materials for embankment, Sub-Base or Base Course can be more than one; however, the most appropriate source from the point of view of quality and economy has been used for preparing the Composite Schedule of Rates – 2009.

2.3 PLANT AND EQUIPMENT

a. Allocation of Code Numbers

The list of plant and equipment includes major equipment whereas small equipment, tools and attachments are ignored, as these have been charged under the item of overhead. After arranging the list in order, code numbers have been allocated starting from 3001 (onwards).

b. **Power, Performance and Maintenance of Plant & Equipment**

To arrive at the decision for choosing the right horse power, appropriate performance level and reasonable maintenance charges, the recommendation of well known suppliers have been considered. In order to decide the price level of any equipment, average cost has been used, which includes C&F price, plus duties and taxes etc.

c. **Formulation of Rates of Plant and Equipment**

The owning and operating costs are similar for all the districts, unlike manpower and materials where rates may differ for each district.

The owning and operating costs are developed by using a standard format. The duties and taxes have been calculated as per the latest Excise and Land Customs Tariff for calculating total cost of equipment.

Fuel consumption, working efficiency and maintenance costs have been fixed after consulting the recommendation of the manufacturers. Equipment economical life and tire life have been fixed after consulting several organizations using heavy and light equipment in the present indigenous conditions.

The owning and operating costs for 80 types of equipment is provided at the end of this chapter.

2.4 FORMULAE FOR CONSTRUCTION ITEMS

All the basic inputs have been updated in the individual rates analysis. These formulae have been created by appropriate quantitative inputs of the following items.

Manpower	Hour and Number
Material	Weight, Volume, Length and Unit
Plant Equipment	Hour and Number
Overheads, profit and preliminaries	25 percent

2.5 OVERHEADS, PROFIT & PRELIMINARIES

a. **Profit**

The level of profit is governed by the degree of competition applicable to the job which is in turn a function of the industry's current work load. The appropriate addition is highly variable.

b. **Head Office Overheads**

An addition to the estimate needs to be made to the net estimate to cover all costs incurred in operating the central services provided by head office. Apart

from general management and accountancy, this will normally include the departments dealing with:

Tendering / Estimating
Planning & design
Wages and bonus
Finance Cost:- *Some companies would include finance costs with head office overheads, but this will vary from contractor to contractor.*

The appropriate addition varies with the extent of services provided centrally and company to company, rather than on site, and with size of organization.

c. **Preliminaries**

Preliminaries cost in Civil Engineering works or indirectly related to the actual quantity of work being carried out. It comprises a definition of method related charges, a checklist of items to be accounted for on typical Civil Engineering Contract.

Generally contract document give detailed requirements for the facilities and equipment to be provided for the employer and the Engineer's Representative given in the Bill of Quantities. Thus General Items given in the BOQ are excluded from the check list of preliminaries.

The following checklist is representative but not exhaustive which is not covered in the BOQ or General items section. The list describes the major preliminaries which are included, implicitly or explicitly, in a typically Civil Engineering Contract.

- ***Contractor's site on costs***
- ***Temporary works (other then those included in unit cost)***
- ***General purpose plant (other than those included in unit cost)***
- ***Other services, charges and fees***
- ***Site Staff Salaries***

  All non-productive supervisory staff on site i.e., agents, clerks, computer operators, security guards, store men, drivers for staff vehicles, cleaners, general labour for general clearance etc.

- ***Plant Maintenance***

  Fitters, electricians and assistants engaged on general plant maintenance on site (excludes drivers who are provided in the unit costs)

- ***Site Transport for Staff and General Use***

  Vehicles / buses provided for use of staff and others including running costs etc.

- ***Contractors offices rental / construction / site huts and associated running costs.***
- ***Canteen, welfare / medical***
- ***General office expenditure***
- ***Provision of postage, stationary and other consumables for general office use***
- ***Mobilization and demobilisation of resources.***
- ***Telecommunications***
- ***Furniture and equipment***
- ***Small tools***
- ***Traffic Control, traffic diversion and sign***
- ***Fencing***
- ***Protective clothing***
- ***Health and safety***
- ***Road lighting***
- ***Cleaning roads etc***
- ***Progress photographs***
- ***Water Supply***
- ***Electric connection***
- ***Notice boards and signs***
- ***Insurances / bonds / bank guarantees / Employees liabilities insurance etc.***

There will be many other items of preliminaries which may have to be considered, which probably will be project and site specific.

Preliminaries % percentage can vary from project to project.

d. **Tax**

Tax has been included as per Government rules.

In the CSR, 25% is added on the estimated unit cost of the items which includes over heads, taxes, preliminaries and profit, however this will vary from project to project and contractor to contractor.

2.6 VARIABLES EFFECTING THE RATE ANALYSIS

Rate analysis in CSR have been prepared based on policy explained here above. However, there are certain factors required to be considered while deciding about more realistic rates in special situations.

a. **Price Escalation**

General and Special escalation has been considered as published by Government Agencies. However, care is to be exercised to consider Government Legislation, which may create condition of Special Escalation.

b. **Double Taxation**

In International tenders, a factor is to be considered which may handicap the contractors from such countries, whose governments have no agreement with the Government of Pakistan to avoid double taxation. Effect of this item will be equal to the limit of tax level in such a country.

c. **Service Roads**

No provision has been made in this rate analysis for road diversion cost or service road, which the contractor has to construct or maintain as a non-BOQ item.

d. **Extra Overhead for Expatriate Staff**

International tenders will require a factor to employ expatriate staff on the project. Effect of this will be equal to the actual expenses on such item.

e. **Other Factors**

Some of the items mentioned in above text included as overhead Cost in Estimates of CSR, may appear as a B.O.Q item in a tender, the cost of such items are to be adjusted from the total estimate of the project.

LIST OF MANPOWER

Man power Code	Description
1001	SITE ENGINEER
1002	ASPHALT PLANT ENGINEER
1003	CONCRETE PLANT ENGINEER
1011	FOREMAN ASPHALT
1012	FOREMAN EARTHWORK
1013	FOREMAN CONCRETE
1014	GENERAL FOREMAN
1021	SUPERVISOR
1022	SURVEYOR
1023	ASSISTANT SURVEYOR
1031	MASON
1032	CARPENTER
1033	PAINTER
1034	STEEL BINDER/CUTTER
1040	HIGHLY SKILLED LABOUR
1041	HELPER
1042	WELDER
1051	LABOUR

Note:

Cost of following Manpower has been included elsewhere as under:

1. Top Management, Senior Engineers and above included in overhead and preliminaries.

2. All indirect Manpower such as Clerk, Typist, Accountant, Lab staff, Workshop staff, Store staff, Security staff etc. is included under overhead and preliminaries.

3. All operators of Light and Heavy Duty Equipment and Plant Included in the hourly rate of the equipment

LIST OF MATERIAL

Material Code	Description	Unit
2001	ROCK	CM
2002	SOIL CLASS-A1	CM
2004	SOIL CLASS-A2	CM
2008	SOIL CLASS-A3	CM
2009	SOIL CLASS-A4	CM
2010	SOIL CLASS-A5	CM
2014	CRUSHED AGGREGATE BASE A	CM
2015	CRUSHED AGGREGATE BASE B	CM
2016	CRUSHED AGGREGATE BASE B1	CM
2017	GRANULAR SUB-BASE A	CM
2018	GRANULAR SUB-BASE B	CM
2019	SAND CLASS C	CM
2021	COARSE SAND	CM
2022	FINE SAND	CM
2023	AGGREGATE 2"-1.1/2"	CM
2024	AGGREGATE 1.1/2"-3/4"	CM
2025	AGGREGATE 3/4"-3/8"	CM
2026	AGGREGATE 3/8"-EACH 4	CM
2027	AGGREGATE EACH4-EACH200	CM
2028	FILLER MATERIAL	CM
2029	BRICK CLASS A	EACH
2030	STONE RANDOM CLASS-A	CM
2031	STONE RANDOM CLASS-B	CM
2032	STONE RANDOM CLASS-C	CM
2033	STONE RANDOM CLASS-D	CM
2034	STONE DRESSED	CM
2035	HAND BROKEN STONE 2.1/2"-1/2"	CM
2041	ASPHALT GRADE 60/70	TON
2042	ASPHALT GRADE 80/100	TON
2043	ASPHALT M.C. 70	TON
2044	ASPHALT M.C. 250	TON
2045	ASPHALT M.C. 800	TON
2046	ASPHALT R.C. 70	TON
2047	ASPHALT R.C. 250	TON
2048	ASPHALT R.C. 800	TON
2049	ASPHALT S.S. 1	TON
2050	ASPHALT S.S. 1H	TON
2051	ASPHALT R.S. 1	TON
2052	ASPHALT R.S. 2	TON
2053	CEMENT TYPE-I (OPC)	BAG
2054	CEMENT TYPE-II (LOW S.R)	BAG
2057	CEMENT TYPE-V (HIGH S.R)	BAG
2058	ACCELERATOR	LIT
2059	RETARDER	LIT
2060	CURING COMPOUND	LIT
2061	STEEL GRADE. 40	TON
2062	STEEL GRADE. 60	TON

LIST OF MATERIAL

Material Code	Description	Unit
2063	PRE-STRESSING STRAND, 3/8", 1/2"	TON
2064	STEEL WIRE MESH, 4" x 4"	KG
2065	WATER	1000 LIT
2067	STEEL WIRE FABRIC AASHTO M-55	TON
2068	STEEL EXPANSION JOINT	KG
2070	COLD STEEL WIRE AASHTO M-32	TON
2072	STRUCTURES SHAPES ASTM A-36	TON
2073	ELASTOMERIC BEARING PAD M-183	c.cm
2077	RCC PIPE CLASS-II 310 MM (AASHTO M-170)	M
2078	RCC PIPE CLASS-II 380 MM (AASHTO M-170)	M
2079	RCC PIPE CLASS-II 460 MM (AASHTO M-170)	M
2080	RCC PIPE CLASS-II 610 MM (AASHTO M-170)	M
2081	RCC PIPE CLASS-II 760 MM (AASHTO M-170)	M
2082	RCC PIPE CLASS-II 910 MM (AASHTO M-170)	M
2083	RCC PIPE CLASS-II 1070 MM (AASHTO M-170)	M
2084	RCC PIPE CLASS-II 1220 MM (AASHTO M-170)	M
2085	RCC PIPE CLASS-II 1520 MM (AASHTO M-170)	M
2091	CAT EYE SINGLE (RAISED PROFILE)	EACH
2092	CAT EYE DOUBLE (RAISED PROFILE)	EACH
2093	STEEL/METAL BEARING DEVICES	KG
2095	BITUMEN IMPREGNATED FIBRE BOARD	SM
2096	NEOPRENE RUBBER JOINT FELT	SM
2097	ASPHALT FELT (3-PLY)	SM
2098	PVC/NEOPRENE WATER STOPS (6")	M
2099	BENTONITE POWDER	KG
2100	JOINT SEALANT FILLER	KG
2101	TRAFFIC SIGN CAT 1	EACH
2102	TRAFFIC SIGN CAT 2	EACH
2103	TRAFFIC SIGN CAT 3 (A, B, C)	SM
2104	PAVEMENT MARKING NON-REFLECTING (CR)	LIT
2105	PAVEMENT MARKING REFLECTING (CR)	LIT
2108	TUNGSTEN CARBIDE BITS	SET
2109	RED OXIDE PAINT	LIT
2110	QUICK LIME	KG
2111	DIESEL	LIT
2112	SUPER	LIT
2113	REGULAR	LIT
2114	OILS (ALL TYPES)	LIT
2115	LUBRICANTS (GREASE)	KG
2116	FURNACE OIL	LIT
2117	BLASTING MATERIAL	KG
2118	ELECTRIC CHARGES COMMERCIAL	KWH
2119	MASTIC WATER PROOF PAINT	KG
2120	SYNTHETIC ENAMEL PAINT	LIT
2121	SHUTTERING (401) A	LS
2122	SHUTTERING (401) B	LS
2123	SHUTTERING (401) C	LS
2124	SHUTTERING (401) D	LS

LIST OF MATERIAL

Material Code	Material Code	Material Code
2125	SHUTTERING (401) E	LS
2126	SHUTTERING (401) F	LS
2127	SHUTTERING (401) G	LS
2128	SHUTTERING (401) H	LS
2129	SHUTTERING (410)	LS
2131	G.M.S BARBED WIRE	KG
2133	ANGLE IRONS DIFFERENT SIZES	KG
2134	STEEL CHANNELS	KG
2135	SHEATHS (3/8", 1/2")	M
2136	LIVE ANCHORAGES (3/8" - 1/2")	EACH
2137	G.I. PIPE 3" DIA	M
2140	G.M.S SCREW, NUTS, BOLTS AND WASHERS	KG
2142	PLANTATION TREES	EACH
2143	MOBILIZATION OF PILING EQUIPMENT	LS
2144	RCC PIPE CLS-IV 310 MM (AASHTO M-170)	M
2145	RCC PIPE CLS-IV 380 MM (AASHTO M-170)	M
2146	RCC PIPE CLS-IV 460 MM (AASHTO M-170)	M
2147	RCC PIPE CLS-IV 610 MM (AASHTO M-170)	M
2148	RCC PIPE CLS-IV 760 MM (AASHTO M-170)	M
2149	RCC PIPE CLS-IV 910 MM (AASHTO M-170)	M
2150	RCC PIPE CLS-IV 1070 MM (AASHTO M-170)	M
2151	RCC PIPE CLS-IV 1220 MM (AASHTO M-170)	M
2152	RCC PIPE CLS-IV 1520 MM (AASHTO M-170)	M
2153	PAVEMENT MARKING NON REFLECTING (TP)	KG
2154	PAVEMENT MARKING REFLECTING (TP)	KG
2155	GALVANIZED FLAT STEEL FASTENERS & WASHERS	KG
2156	GALVANIZED U-BOLT CLAMP WITH 2 NUTS & TIE BOLTS	KG
2157	GALVANIZED SUPPORTING HOOKS CAST IN PRECAST POSTS	EACH
2158	GALVANIZED CHAIN LINK WIRE MESH FABRIC	SM
2159	GALVANIZED WIRE 3.76MM Ø TENSION, 3MM Ø STIRRUP	KG
2160	PRE-CAST CONCRETE TUFF KERB STONE(K-5)	EACH
2161	LIFTING DEVICE ANCHORS	EACH
2162	MS SHEET	KG
2163	FABRICATION	KG
2164	GALVANIZATION	KG

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY
(CSR- Jan-2009)

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3001	Bull-Dozer. 200 H.P	1,503.78	2,064.93	**3,568.71**
3002	Bull-Dozer. 120 H.P	973.02	1,011.88	**1,984.90**
3003	Bull-Dozer. 90 H.P	796.11	672.49	**1,468.60**
3004	Front End Loader. 3.00 Cu.M	1,457.39	1,558.64	**3,016.03**
3005	Front End Loader. 2.50 Cu.M	942.30	1,267.74	**2,210.04**
3006	Front End Loader. 1.50 Cu.M	854.12	1,044.74	**1,898.86**
3007	Grader. 165 H.P	1,210.40	1,411.34	**2,621.74**
3008	Grader. 140 H.P	857.12	1,117.67	**1,974.79**
3011	Tandem Vibratory Roller. 10-12 Ton	751.89	876.19	**1,628.08**
3012	Tandem Vibratory Roller. 8 Ton	692.91	766.50	**1,459.41**
3013	Tandem Vibratory Roller. 6 Ton	339.09	524.82	**863.91**
3014	Tandem Vibratory Roller. 1.5 Ton	240.30	281.56	**521.86**
3015	Combination Roller. 18 T	844.61	1,201.71	**2,046.32**
3016	Combination Roller 10 - 12 T	669.88	1,079.05	**1,748.93**
3017	Combination Roller 8 T	479.07	691.31	**1,170.38**
3018	P.T.R (9 - Wheeler) 21 T	405.57	941.13	**1,346.70**
3019	P.T.R (9 - Wheeler) 18 T	369.27	781.57	**1,150.84**
3020	Static Tandem Roller 12 T	140.07	488.28	**628.35**
3021	Static Tandem Roller 8T	117.93	486.84	**604.77**
3022	Tractor 80 H. P	62.95	591.82	**654.77**
3023	Tractor 50 H. P	37.56	376.62	**414.18**
3024	Water Tank Bowser Type 12000 Litre	240.49	618.21	**858.70**
3025	Water Tank Tow Type 4000 Litre	52.16	382.07	**434.23**
3031	Motor Scraper 400 H. P	1,449.78	5,135.17	**6,584.95**
3032	Dumper 18 T	288.03	1,084.37	**1,372.40**
3033	Dumper 10 T	230.44	693.31	**923.75**
3034	Flat Body Truck 8 T	177.69	513.95	**691.64**
3047	Excavator, (Track Type) 100 H. P	825.60	727.34	**1,552.94**
3048	Power Broom	92.93	527.46	**620.39**
3051	Bitumen Distributor Tow Type 2000 Litre	155.67	414.85	**570.52**
3052	Bitumen Sprayer (Manual) 250 Litre	11.93	51.99	**63.92**
3053	Aggregate Spreader 4 M Wide	729.78	510.65	**1,240.43**
3054	Asphalt Plant 120 T	7,983.72	8,759.34	**16,743.06**
3055	Asphalt Plant 80 T	5,655.13	7,446.96	**13,102.09**
3056	Asphalt Plant. 40 Ton	4,657.19	4,114.85	**8,772.04**

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY
(CSR – Jan-2009)

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3057	Asphalt Plant. 20 Ton	3,326.57	3,151.87	**6,478.44**
3058	Paver 4 M Wide	729.78	1,109.56	**1,839.34**
3059	Paver 2.5 M Wide	501.27	990.82	**1,492.09**
3061	Compressor. 300 CFM	168.72	907.25	**1,075.97**
3062	Rock Driller	204.48	79.81	**284.29**
3071	Concrete Batching Plant. 30 CUM/H	554.97	2,499.29	**3,054.26**
3072	Concrete Static Mixer 1 Cu.Y	110.76	331.90	**442.66**
3073	Concrete Static Mixer 1/4 Cu.Y	25.56	221.24	**246.80**
3074	Concrete Transit Mixer 6 Cu.M	807.29	1,043.38	**1,850.67**
3075	Concrete Transit Mixer 4 Cu.M	754.19	752.33	**1,506.52**
3081	Trailer Low Bed 30 T.	506.66	1,000.71	**1,507.37**
3082	Crane. 45 T.	651.30	1,039.13	**1,690.43**
3083	Crane. 20 T.	564.69	849.55	**1,414.24**
3084	Cold Milling Machine. 1 M Width	1,765.58	1,265.48	**3,031.06**
3085	Road Marking Machine.	135.32	346.26	**481.58**
3086	Pump 4 " Delivery (Diesel)	43.50	262.48	**305.98**
3087	Pug mill 40 Tons per Hour.	746.27	2,381.43	**3,127.70**
3088	Chipping Spreader 3 Meter Wide	70.03	379.76	**449.79**
3089	Sand Blasting Machine	73.71	1,651.67	**1,725.38**
3120	Stressing Equipment	112.01	1,627.88	**1,739.89**
3121	Asphalt Cutter	47.14	321.07	**368.21**
3122	Concrete Cutter	47.14	321.07	**368.21**
3123	Electric Saw	21.30	810.84	**832.14**
3195	Truck (3-Axle)	248.42	668.52	**916.94**
3196	Tractor Trolley	94.15	445.65	**539.80**
3197	Trailer (30 Ton)	445.63	1,000.71	**1,446.34**
3198	Welding Plant	55.99	815.06	**871.05**
3199	Generator (Diesel) 150 KVA	214.62	1,365.49	**1,580.11**
3200	Generator (Diesel) 250 KVA	355.54	2,154.76	**2,510.30**
3202	Rock Crushing & Screening (200 T/H)	1,233.96	8,294.10	**9,528.06**
3205	Secondary Crusher	59.64	2,990.77	**3,050.41**
3206	Diesel Tanker	215.24	516.80	**732.04**
3208	Jack Hammer	33.60	304.09	**337.69**
3209	Pilling Rig (upto 1.5 m dia)	417.40	667.99	**1,085.39**

PLANT AND EQUIPMENT OWNING OPERATING COST SUMMARY
(CSR – Jan-2009)

Equipment Code	Description	T – Owning Cost	T- Operating Cost	T – Hourly O.W. & Operating Cost
3209a	Pilling Rig (above 1.5 m dia)	571.50	1,235.49	**1,806.99**
3210	Vibrator (Poker 1.5 ")	17.40	302.76	**320.16**
3211	Percussion Boring Rig	119.28	267.80	**387.08**
3212	Forgoing / Shape Machine	67.20	1,561.84	**1,629.04**
3214	Concrete Pump	621.60	1,170.56	**1,792.16**
3215	Plate Compactor	43.50	305.76	**349.26**
3217	Girder Launcher	1,464.46	1,034.77	**2,499.23**
3218	Tripod & Chain Pulley (20 Ton)	11.21	128.54	**139.75**
3219	Electric Generator 50 KVA	81.79	4,531.51	**4,613.30**
3220	Asphalt Recycling Machine	7,154.11	3,961.17	**11,115.28**
3221	Road Marking Machine (TP)	196.02	416.54	**612.56**

QUARRY SITES (SIND)

Dist Code	District	Sites
AGGREGATES		
21	Jacobabad	Arrore, Uban, Kashmore, Kot Digi
21-A	Kashmor	Arrore, Uban, Kashmore, Kot Digi
62	Shikarpur	Kot Digi, Sukkar, Arrore, Uban, Kashmore
65	Sukkur	Arrore, Uban, Kot Digi, Rohri
65-A	Ghotki	Arrore, Uban, Kot Digi, Rohri
29	Khairpur	Kot Digi
38	Larkana	Kot Digi, Dadu area
13	Dadu	Dadu Area, Bolari, Kot Digi
49-B	Naushero Feroz	Kot Digi
49	Nawab Shah	Thatt, Dadu, Kot Digi, Bhulari
59	Sanghar	Bhulari, thata
20	Hyderabad	Dadu, Bulari, Thata
45-A	Mir Pur Khas	Thatt, Bhuleri, Jamshoro
50-A	Omar Kot	Bhuleri, Thata
3	Badin	Bhulari, Thata
67	Tharparkar	Bhulari, Thata
68	Thatta	Thatta, Bhulari
26	Karachi	Hub, Nooriabad, Thatta
CRUSHED AGGREGATE BASE		
21	Jacobabad	Arrore, Uban, Kashmore, Kot Digi
21-A	Kashmor	Arrore, Uban, Kashmore, Kot Digi
62	Shikarpur	Kot Digi, Sukkar, Arrore, Uban, Kashmore
65	Sukkur	Arrore, Uban, Kot Digi, Rohri
65-A	Ghotki	Arrore, Uban, Kot Digi, Rohri
29	Khairpur	Kot Digi
38	Larkana	Kot Digi, Dadu area
13	Dadu	Dadu Area, Bolari, Kot Digi
49-B	Naushero Feroz	Kot Digi, Local
49	Nawab Shah	Thatt, Dadu, Kot Digi, Bhulari
59	Sanghar	Bulari, Dadu/Nawab Shah Area
20	Hyderabad	Dadu, Bulari, Thata
45-A	Mir Pur Khas	Thatt, Bhuleri, Jamshoro
50-A	Omar Kot	Bhulari, Thata, Dadu Area
3	Badin	Bhulari, Thata
67	Tharparkar	Bhulari, Thata, Dadu Area

QUARRY SITES (SIND)

Dist Code	District	Sites
68	Thatta	Thatta, Bhulari
26	Karachi	Hub, Nooriabad, Thatta
GRANULAR SUB-BASE		
21	Jacobabad	Arrore, Uban, Kashmore, Kot Digi
21-A	Kashmor	Arrore, Uban, Kashmore, Kot Digi
62	Shikarpur	Kot Digi, Sukkar, Arrore, Uban, Kashmore
65	Sukkur	Arrore, Uban, Kot Digi, Rohri
65-A	Ghotki	Arrore, Uban, Kot Digi, Rohri
29	Khairpur	Kot Digi
38	Larkana	Kot Digi, Dadu area
13	Dadu	Dadu Area, Bolari, Kot Digi
49-B	Naushero Feroz	Kot Digi, Local
49	Nawab Shah	Thatt, Dadu, Kot Digi, Bhulari
59	Sanghar	Bulari, Dadu/Nawab Shah Area
20	Hyderabad	Dadu, Bulari, Thata
45-A	Mir Pur Khas	Thatt, Bhuleri, Jamshoro
50-A	Omar Kot	Bhulari, Thata, Dadu Area
3	Badin	Bhulari, Thata
67	Tharparkar	Bhulari, Thata, Dadu Area
68	Thatta	Thatta, Bhulari
26	Karachi	Hub, Nooriabad, Thatta
FILLER MATERIAL		
21	Jacobabad	Arrore, Uban, Kashmore, Kot Digi
21-A	Kashmor	Arrore, Uban, Kashmore, Kot Digi
62	Shikarpur	Kot Digi, Sukkar, Arrore, Uban, Kashmore
65	Sukkur	Arrore, Uban, Kot Digi, Rohri
65-A	Ghotki	Arrore, Uban, Kot Digi, Rohri
29	Khairpur	Kot Digi
38	Larkana	Kot Digi, Dadu area
13	Dadu	Dadu Area, Bolari, Kot Digi
49-B	Naushero Feroz	Kot Digi
49	Nawab Shah	Thatt, Dadu, Kot Digi, Bhulari
59	Sanghar	Bhulari, thata
20	Hyderabad	Dadu, Bulari, Thata
45-A	Mir Pur Khas	Thatt, Bhuleri, Jamshoro
50-A	Omar Kot	Bhuleri, Thata
3	Badin	Bhulari, Thata

QUARRY SITES (SIND)

Dist Code	District	Sites
67	Tharparkar	Bhulari, Thata
68	Thatta	Thatta, Bhulari
26	Karachi	Hub, Nooriabad, Thatta

Quantities of Material for Bituminous Surface Treatments

Surface Treatment		Aggregate		Bituminous Material	
Type	Application	Size No.	Quantity Kg/ Sq.M	Quantity Litres/ Sq.M	Type
Single	Single	2	12.5	1.19 1.63	(a) (b)
Double	First	1	24	1.9 2.14	(a) (b)
	Second	3	12.5	1.19 1.63	(a) (b)
Triple	First	1	24	1.9 2.14	(a) (b)
	Second	2	12.5	1.19 1.63	(a) (b)
	Third	3	6.5	0.68	(c)
Seal Coat / Pad Coat with Aggregate		4	4	0.5	(c)
Prime Coat	Over Sub grade, Sub base , WBM or Aggregate base			0.65 ~ 1.75	(b)
	Over Bridge, wearing surface. Concrete pavement			0.15 ~ 0.4	(b)
Tack Coat	Over Previously laid asphaltic layer			0.2 ~ 0.4	Cut-back
	Over Previously laid asphaltic layer			0.3 ~ 0.6	Emulsified asphalt
Asphaltic Base	Over prime or tack coated surface	As per NHA / Project Spec's		3% (Min.)	Grade 40/50, 60/70, 80/100
Asphaltic Wearing Coarse	Over tack coated surface	As per NHA / Project Spec's		3.5% (Min.)	Grade 40/50, 60/70, 80/100

Note:

(i) Bituminous material types are (a) asphalt cement, (b) cut-back or emulsified and (c) asphalt cement, cut-back and emulsified

Portland Cement Concrete Requirements

Class of Concrete	Min. Cement Kg/ Cubic Meter	Max. Size of Coarse Aggregate (mm)	28 Days Compressive Strength (Min) (Cylinder)		Consistency (Range in Slump)	Maximum Permissible Water - Cement Ratio
			(Kg/Sq. Cm)	(Psi)	Vibrated (mm)	
A_1	300	20	210	3000	25 - 75	0.58
A_2	350	25	245	3500	100 - 150	0.58
A_3	400	38	280	4000	100 - 150	0.58
B	250	51	170	2450	25 - 75	0.65
C	275	38	210	3000	25 - 75	0.58
D_1	450	25	350	5000	50 - 100	0.40
D_2	500	25	425	6000	50 - 100	0.40
D_3	550	25	500	7100	50 - 100	0.40
Y	400	13	210	3000	25 - 75	0.58
Lean Concrete	175	51	100	1420	–	–

Cement Bags per Unit Quantity

Sr. No	Description	Unit	Qty of Cement in Bag of 50 Kg
1	Burnt brickwork in Cement Mortar (1:6)	CM	2.10
2	Burnt brickwork in Cement Mortar (1:3)	CM	2.79
3	Pointing brickwork (flush) in Cement Mortar (1:3)	SM	0.018
4	Pointing brickwork (flush) in Cement Mortar (1:4)	SM	0.013
5	Pointing brickwork (flush) in Cement Mortar (1:6)	SM	0.009
7	Random rubble masonry in Cement Mortar (1:4)	CM	1.960
8	Pointing in Cement Mortar (1:3) flush to stone masonry	SM	0.063
9	Pointing in Cement Mortar (1:4) flush to stone masonry	SM	0.050
10	13 mm thick cement plaster (1:4)	SM	0.14
11	13 mm thick cement plaster (1:3)	SM	0.20
12	19 mm thick cement plaster (1:6)	SM	0.13
13	19 mm thick cement plaster (1:4)	SM	0.20

CONVERSION FACTORS

To Convert	Into	Multiply By
Length		
Inch	Millimetre	25.4
Millimetre	Inch	0.03937
Foot	Metre	0.30480
Metre	Foot	3.28084
Yard	Metre	0.91440
Metre	Yard	1.09361
Mile	Kilometre	1.60934
Kilometre	Mile	0.62137
Mass. Weight		
Pound	Kilogram	0.45359237
Kilogram	Pound	2.20462
Ounce	Gram	28.3495
Gram	Ounce	0.03527
Quintal	Kilogram	100
Grain	Milligram	64.7989
Hundred Weight	Kilogram	50.8023
Tonne	Hundred Weight	19.6841
Tonne	Kilogram	1000
Ton	Kilogram	1016.0469
Ton	Pound	2240
Ton	Tonne	1.0160469
Tonne	Ton	0.9842065
Seer	Kilogram	0.9331
Maund	Kilogram	37.324
Tola	Gram	11.664
Capacity Volume		
Pint (UK)	Litre	0.568261
Gallon (Imperial)	Litre	4.54609
Cubic foot	Litre	28.3168
Cubic metre	Litre	1000
Litre	Cubic foot	0.0353147
Fluid ounce	Millilitre	28.413
Litre	Gallon (Imperial)	0.219969
Cubic inch	Cubic millimetre	16387.1
Cubic foot	Cubic metre	0.0283168
Cubic metre	Cubic foot	35.3147
Cubic yard	Cubic metre	0.764555
Cubic metre	Cubic yard	1.30795
Acre foot	Hectare metre	0.12334

Weights & Standard Sizes of Sheets

Birmingham Gauge	Thickness in mm	Kg Per Sqm
28	0.40	3.15
26	0.50	3.90
24	0.63	4.95
22	0.80	6.30
20	1.00	7.85
18	1.25	9.80
16	1.60	12.75
14	2.00	15.70
12	2.50	19.60
10	3.15	24.75
8	4.00	31.40

To Convert	Into	Multiply
Area		
Square inch	Square millimetre	645.16
Square millimetre	Square inch	0.00155
Square foot	Square metre	0.0929
Square metre	Square foot	10.7639
Square yard	Square metre	0.836127
Square metre	Square yard	1.19599
Acre	Square metre	4046.8564
Acre	Hectare	0.40468564
Hectare	Acre	2.47105
Hectare	Square metre	10000
Square mile	Square kilometre	2.58999
Square kilometre	Square mile	0.386102
Square mile	Hectare	258.999
Hectare	Square mile	0.00386102
Mass Per Unit Area		
Ton per square mile	Kilogram per square kilometre	392.298
Pound per square foot	Kilogram per square metre	4.88243
Kilogram per square metre	Pound per square foot	0.204816
Mass Per Unit Volume		
Ton per cubic foot	Kilogram per cubic metre	16.0185
Pound per cubic foot	Grams per litre	16.0185
Kilogram per cubic metre	Pound per cubic foot	0.062428
Grams per litre	Pound per cubic foot	0.062428

The weight of Mild Steel and Ribbed Tor Steel bars

Dia in Millimetre	Sectional area in Square Centimetre	Weight in Kilogram Per Metre
6	0.283	0.222
8	0.502	0.395
10	0.785	0.617
12	1.131	0.888
16	2.011	1.578
18	2.545	2.000
22	3.801	2.980
25	4.909	3.854
28	6.157	4.830
32	8.042	6.313
35	10.179	7.990
40	12.566	9.864
50	19.635	15.410

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

SIND

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

LIST OF DISTRICTS (SIND)

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

BADIN
(03)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

National Highway Authority
Islamabad

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.81	10.10	-	2.73	13.64
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	8.05	173.32	1.17	45.64	228.18
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	23.29	456.54	2.63	120.61	603.07
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	93.16	1,826.16	10.51	482.46	2,412.28
103	STRIPPING	CM	2.78	93.22	-	24.00	120.00
104	COMPACTION OF NATURAL GROUND	SM	0.39	9.91	0.76	2.77	13.83
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.57	135.76	-	35.08	175.40
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	133.92	316.30	50.82	125.26	626.30
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	18.89	337.99	-	89.22	446.11
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	12.26	262.40	-	68.66	343.32
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.74	120.27	-	31.00	155.01
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	133.92	316.30	50.82	125.26	626.30
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.24	316.03	-	84.32	421.58
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.54	263.92	-	68.37	341.83
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.67	137.60	0.38	36.41	182.06
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	66.54	287.11	70.80	106.12	530.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	117.98	427.01	33.88	144.72	723.60
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	100.14	292.53	-	98.17	490.84
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	60.68	238.86	-	74.89	374.43
107d	GRANULAR BACK FILL	CM	37.04	137.14	563.21	184.35	921.73
107e	COMMON BACK FILL	CM	28.35	62.84	5.09	24.07	120.35
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.41	174.71	5.09	46.80	234.02
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	21.96	482.48	54.04	139.62	698.11
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.47	416.71	2.42	108.90	544.50
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	14.64	369.34	-	96.00	479.98
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.56	177.46	7.94	48.49	242.45
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.73	76.32	5.09	22.03	110.17
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	15.86	110.29	3.03	32.30	161.48
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.50	27.34	1.46	7.57	37.86

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.09	18.21	0.77	5.02	25.09
110	IMPROVED SUB-GRADE	CM	10.98	120.02	55.27	46.57	232.83
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.93	15.26	0.79	4.25	21.23
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.38	15.57	0.90	4.46	22.31
201	GRANULAR SUB-BASE	CM	8.64	255.06	613.31	219.25	1,096.26
202	AGGREGATE BASE	CM	10.04	326.54	862.13	299.68	1,498.39
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	80.78	1,510.17	5,883.97	1,868.73	9,343.65
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	83.24	1,510.17	6,306.63	1,975.01	9,875.05
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	88.93	1,577.28	5,874.72	1,885.23	9,426.16
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	88.93	1,571.31	6,449.54	2,027.44	10,137.21
204b	CEMENT STABILIZED BASE	CM	31.01	569.10	1,037.54	409.41	2,047.07
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	254.00	915.38	50,762.43	12,982.95	64,914.76
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	254.00	915.38	49,184.30	12,588.42	62,942.10
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	108.04	112.80	1,050.93	317.94	1,589.72
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	163.02	2,437.94	5,674.87	2,068.96	10,344.80
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	119.21	126.27	826.85	268.08	1,340.42
207a	DEEP PATCHING (0-15 cm)	SM	1.89	45.04	1.26	12.05	60.23
207b	DEEP PATCHING (16-30 cm)	SM	1.89	39.67	1.26	10.71	53.53
208	REINSTATEMENT OF ROAD SURFACE	SM	2.01	57.10	0.56	14.92	74.59
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.23	110.61	0.68	28.38	141.90
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.45	22.12	0.14	5.68	28.38
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	36.03	9.48	47.40
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.22	10.52	52.62
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.08	3.95	19.73
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.59	4.57	22.87
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	71.99	20.09	100.47
304b	DOUBLE SURFACE TREATMENT	SM	1.18	14.15	140.27	38.90	194.51
304c	TRIPLE SURFACE TREATMENT	SM	1.99	19.94	160.02	45.49	227.44
304d	SEAL COAT	SM	0.75	4.12	50.51	13.85	69.23

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	75.20	1,489.33	6,887.43	2,112.99	10,564.94
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	75.20	1,438.23	7,417.77	2,232.80	11,164.01
307a	DENSE GRADED HOT BIT-MAC	CM	188.66	379.77	5,659.37	1,556.95	7,784.76
307b	OPEN GRADED HOT BIT-MAC	CM	188.66	379.77	5,548.84	1,529.32	7,646.60
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	32.86	590.65	2,043.29	666.70	3,333.48
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	27.80	650.70	42,774.16	10,863.16	54,315.82
309a	COLD MILLING, 0 - 30 mm	SM	1.03	24.99	8.68	8.67	43.37
309b	COLD MILLING, 0 - 50 mm	SM	1.72	41.65	14.46	14.46	72.29
309c	COLD MILLING, 0 - 70 mm	SM	2.58	62.48	21.69	21.69	108.44
401a1i	CONCRETE CLASS "A1" (Underground)	CM	555.51	1,059.94	4,009.42	1,406.22	7,031.08
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	555.51	1,059.94	4,286.89	1,475.58	7,377.92
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	555.51	1,059.94	4,841.84	1,614.32	8,071.60
401a2i	CONCRETE CLASS "A2" (Underground)	CM	555.51	1,059.94	4,387.42	1,500.72	7,503.58
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	555.51	1,059.94	4,664.89	1,570.08	7,850.42
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	555.51	1,059.94	5,219.84	1,708.82	8,544.10
401a3i	CONCRETE CLASS "A3" (Underground)	CM	555.51	1,059.94	4,765.42	1,595.22	7,976.08
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	555.51	1,059.94	5,042.89	1,664.58	8,322.92
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	555.51	1,059.94	5,597.84	1,803.32	9,016.60
401b	CONCRETE CLASS "B"	CM	731.69	805.93	3,327.57	1,216.30	6,081.49
401ci	CONCRETE CLASS "C" (Underground)	CM	555.69	500.55	3,628.87	1,171.28	5,856.38
401cii	CONCRETE CLASS "C" (On ground)	CM	555.69	500.55	3,747.21	1,200.86	6,004.31
401ciii	CONCRETE CLASS "C" (Elevated)	CM	555.69	500.55	3,983.90	1,260.03	6,300.16
401d	CONCRETE CLASS "D1"	CM	854.41	1,265.57	5,354.90	1,868.72	9,343.60
401e	CONCRETE CLASS "Y"	CM	1,179.89	500.55	4,765.00	1,611.36	8,056.79
401f	LEAN CONCRETE	CM	491.83	507.52	2,598.85	899.55	4,497.74
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,884.91	947.15	5,008.56	1,960.15	9,800.77
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,884.91	947.15	5,764.56	2,149.15	10,745.77
401gii	PRECAST CONCRETE CLASS "B"	CM	1,884.91	947.15	4,863.78	1,923.96	9,619.80
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,884.91	947.15	6,142.56	2,243.65	11,218.27

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,884.91	947.15	6,520.56	2,338.15	11,690.77
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,884.91	947.15	6,898.56	2,432.65	12,163.27
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,645.42	781.47	59,358.00	15,446.22	77,231.11
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,645.42	781.47	66,708.00	17,283.72	86,418.61
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,367.47	5,393.81	55,149.25	15,477.63	77,388.17
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,821.71	15,659.05	133,741.93	38,055.67	190,278.37
405b	LAUNCHING OF GIRDER	TON	66.45	532.52	-	149.74	748.72
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	122.49	-	295.65	104.53	522.67
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	122.49	-	295.30	104.45	522.23
406c	STEEL EXPANSION JOINTS	KG	10.10	26.40	89.37	31.47	157.33
406d	WATER STOPS 6" SIZE	M	108.05	-	1,009.93	279.50	1,397.48
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	42.58	-	2,879.42	730.50	3,652.51
406g	STEEL OR METAL BEARING DEVICES	KG	22.15	69.68	115.50	51.83	259.17
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	365.17	1,654.04	895.07	728.57	3,642.86
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	547.75	2,481.06	1,342.61	1,092.86	5,464.29
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	547.75	2,481.06	990.57	1,004.85	5,024.24
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	912.92	4,135.11	1,162.92	1,552.74	7,763.68
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	782.51	4,884.94	1,334.41	1,750.47	8,752.33
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,369.39	6,909.78	1,469.86	2,437.26	12,186.28
407h	PILE LOAD TEST UP TO 120 TON	EACH	26,507.20	45,769.30	112,412.70	46,172.30	230,861.50
407i	PILE LOAD TEST UP TO 240 TON	EACH	49,769.11	45,769.30	224,825.40	80,090.95	400,454.77
407j	PILE LOAD TEST UP TO 360 TON	EACH	73,031.03	50,188.38	337,238.10	115,114.38	575,571.89
407k	CONFIRMATORY BORING (NX SIZE)	M	219.38	1,582.02	6.37	451.94	2,259.71
410	BRICK WORK	CM	349.81	282.72	2,807.73	860.07	4,300.33
411a	STONE MASONRY RANDOM DRY	CM	306.73	107.96	648.69	265.85	1,329.23
411b	STONE MASONRY RANDOM WITH MORTAR	CM	327.40	166.68	1,729.68	555.94	2,779.70
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	399.77	107.96	717.67	306.35	1,531.75
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	466.96	166.68	1,796.04	607.42	3,037.10

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	73.57	11.74	44.66	32.50	162.48
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	632.37	264.08	1,701.23	649.42	3,247.11
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	257.25	437.48	645.10	334.96	1,674.79
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	251.20	577.19	836.22	416.15	2,080.76
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	242.88	935.96	1,007.38	546.56	2,732.78
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	256.05	1,146.39	1,558.46	740.23	3,701.13
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	293.58	1,078.41	2,201.53	893.38	4,466.91
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	360.42	1,331.30	3,618.58	1,327.58	6,637.88
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	466.43	1,481.41	4,684.51	1,658.09	8,290.44
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	551.61	1,798.85	5,969.56	2,080.01	10,400.03
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	648.47	2,098.66	9,219.65	2,991.69	14,958.47
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	257.25	507.33	665.17	357.44	1,787.19
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	251.20	577.19	783.23	402.90	2,014.52
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	235.50	935.96	958.23	532.42	2,662.11
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	256.05	1,146.39	1,593.11	748.89	3,744.44
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	293.58	1,078.41	3,027.26	1,099.81	5,499.06
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	360.42	1,331.30	4,444.58	1,534.08	7,670.38
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	466.43	1,481.41	6,206.69	2,038.63	10,193.17
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	551.61	1,798.85	8,415.77	2,691.56	13,457.79
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	648.47	2,098.66	11,835.40	3,645.63	18,228.16
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	101.44	118.93	589.92	202.57	1,012.86
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	829.77	612.95	3,677.57	1,280.07	6,400.35
507a	STEEL WIRE MESH FOR GABIONS	KG	5.46	-	103.98	27.36	136.80
507b	ROCK FILL IN GABIONS	CM	110.61	-	480.12	147.68	738.40
508a	BRICK PAVING (SINGLE COURSE)	SM	118.88	32.70	222.63	93.55	467.76
508b	BRICK PAVING (DOUBLE COURSE)	SM	211.93	32.70	440.13	171.19	855.94
509a	RIP RAP CLASS "A"	CM	509.60	-	553.89	265.87	1,329.36
509b	RIP RAP CLASS "B"	CM	492.45	-	549.46	260.48	1,302.39
509c	RIP RAP CLASS "C"	CM	494.80	-	553.89	262.17	1,310.86

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	623.28	102.14	1,981.02	676.61	3,383.06
509e	GROUTED RIP RAP CLASS "B"	CM	599.94	81.72	1,828.35	627.50	3,137.50
509f	GROUTED RIP RAP CLASS "C"	CM	592.99	68.10	1,875.62	634.18	3,170.89
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	879.24	353.02	4,235.92	1,367.05	6,835.23
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	55.07	191.97	564.00	202.76	1,013.81
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	117.23	390.69	-	126.98	634.91
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	163.18	67.48	90.01	80.17	400.83
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	208.87	86.37	115.21	102.61	513.06
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	262.63	180.32	395.48	209.61	1,048.04
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	328.28	225.40	494.35	262.01	1,310.05
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	294.59	572.25	2,243.38	777.55	3,887.77
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,032.29	670.54	4,078.66	1,445.37	7,226.85
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	150.38	90.27	437.57	169.56	847.78
603	BRICK EDGING	M	9.69	-	33.60	10.82	54.12
604a	METAL GUARD RAIL	M	19.80	70.84	1,579.36	417.50	2,087.50
604b	METAL GUARD RAIL END PIECES	EACH	27.05	-	1,197.58	306.16	1,530.78
604d	STEEL POST OF METAL GUARD RAIL	EACH	90.56	976.73	3,776.31	1,210.90	6,054.50
605a	CONCRETE BEAM GUARD RAIL	M	82.40	30.82	590.20	175.86	879.28
605c	CONCRETE POST FOR GUARD RAIL	M	101.18	27.36	590.38	179.73	898.65
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	254.57	255.15	6,867.31	1,844.26	9,221.29
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	79.79	382.72	9,276.52	2,434.76	12,173.80
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	254.57	541.89	11,916.93	3,178.35	15,891.73
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	858.14	598.64	21,005.97	5,615.69	28,078.44
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	171.63	119.73	9,223.42	2,378.69	11,893.47
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	277.80	-	1,304.72	395.63	1,978.15
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	277.80	-	1,957.08	558.72	2,793.60
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.15	5.86	17.71	6.68	33.39
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.05	4.03	39.73	11.20	56.00
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.15	5.86	23.63	8.16	40.79

District: Badin **District Code: 03**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.05	4.03	52.98	14.52	72.58
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	73.01	5.22	171.12	62.34	311.68
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	73.01	9.98	500.60	145.90	729.50
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.93	8.59	24.63	9.29	46.43
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.93	9.63	67.50	20.27	101.33
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.93	6.95	32.84	10.93	54.65
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.93	9.63	90.01	25.89	129.46
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	73.01	3.73	237.77	78.63	393.14
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	73.01	7.90	851.20	233.03	1,165.13
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	61.94	3.73	114.08	44.94	224.69
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	61.94	7.90	334.24	101.02	505.10
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	61.94	3.73	158.52	56.05	280.23
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	61.94	7.90	568.32	159.54	797.71
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	10.67	81.62	193.87	71.54	357.70
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	10.67	81.62	233.87	81.54	407.69
610b	RIGHT OF WAY MARKER	EACH	117.95	121.33	301.21	135.12	675.61
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	672.85	976.31	2,023.01	918.04	4,590.20
610d	TEN KILOMETRE POST	EACH	1,299.88	1,952.61	4,440.82	1,923.33	9,616.64
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	145.89	91.00	955.92	298.20	1,491.02

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

DADU
(13)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.82	10.10	-	2.73	13.65
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	8.14	173.32	1.17	45.66	228.29
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	23.49	456.54	2.63	120.66	603.32
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	93.96	1,826.16	10.51	482.66	2,413.29
103	STRIPPING	CM	2.84	93.22	-	24.01	120.07
104	COMPACTION OF NATURAL GROUND	SM	0.40	9.91	0.76	2.77	13.84
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.67	135.76	-	35.11	175.53
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	133.25	316.30	50.82	125.09	625.46
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	18.51	337.99	-	89.13	445.64
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.98	262.40	-	68.59	342.97
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.82	120.27	-	31.02	155.11
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	133.25	316.30	50.82	125.09	625.46
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.10	316.03	-	84.28	421.41
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.35	263.92	-	68.32	341.59
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.75	137.60	0.38	36.43	182.16
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	66.13	287.11	70.80	106.01	530.06
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	117.23	427.01	33.88	144.53	722.65
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	99.13	292.53	-	97.92	489.59
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	60.29	238.86	-	74.79	373.94
107d	GRANULAR BACK FILL	CM	37.16	137.14	461.33	158.91	794.53
107e	COMMON BACK FILL	CM	28.64	62.84	5.09	24.14	120.71
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.31	174.71	5.09	46.78	233.88
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	21.80	482.48	54.04	139.58	697.91
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.35	416.71	2.42	108.87	544.35
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	14.54	369.34	-	95.97	479.85
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.45	177.46	7.94	48.46	242.31
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.68	76.32	5.09	22.02	110.11
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	15.81	110.29	3.03	32.28	161.41
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.49	27.34	1.46	7.57	37.85

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.09	18.21	0.77	5.02	25.09
110	IMPROVED SUB-GRADE	CM	10.90	120.02	53.20	46.03	230.16
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.95	15.26	0.79	4.25	21.25
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.38	15.57	0.90	4.46	22.31
201	GRANULAR SUB-BASE	CM	8.51	255.06	546.79	202.59	1,012.96
202	AGGREGATE BASE	CM	9.82	326.54	799.71	284.02	1,420.09
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	79.76	1,510.17	5,774.55	1,841.12	9,205.60
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	82.02	1,510.17	6,201.60	1,948.45	9,742.23
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	87.67	1,577.28	5,764.87	1,857.46	9,287.28
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	87.67	1,571.31	6,345.66	2,001.16	10,005.80
204b	CEMENT STABILIZED BASE	CM	30.42	569.10	892.47	373.00	1,864.99
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	255.66	915.38	51,198.75	13,092.45	65,462.23
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	255.66	915.38	49,620.62	12,697.91	63,489.57
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	108.16	112.80	900.11	280.27	1,401.34
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	160.40	2,437.94	5,533.27	2,032.90	10,164.51
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	119.02	126.27	847.05	273.09	1,365.43
207a	DEEP PATCHING (0-15 cm)	SM	1.90	45.04	1.26	12.05	60.24
207b	DEEP PATCHING (16-30 cm)	SM	1.90	39.67	1.26	10.71	53.54
208	REINSTATEMENT OF ROAD SURFACE	SM	2.00	57.10	0.56	14.92	74.58
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.30	110.61	0.68	28.40	141.99
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.46	22.12	0.14	5.68	28.40
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	36.34	9.56	47.78
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.56	10.61	53.05
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.21	3.98	19.89
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.74	4.61	23.06
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	71.91	20.07	100.37
304b	DOUBLE SURFACE TREATMENT	SM	1.17	14.15	139.30	38.66	193.29
304c	TRIPLE SURFACE TREATMENT	SM	1.98	19.94	158.85	45.19	225.96
304d	SEAL COAT	SM	0.74	4.12	50.70	13.89	69.46

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	73.90	1,489.33	6,786.38	2,087.40	10,437.01
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	73.90	1,438.23	7,317.20	2,207.33	11,036.65
307a	DENSE GRADED HOT BIT-MAC	CM	185.97	379.77	5,577.61	1,535.84	7,679.19
307b	OPEN GRADED HOT BIT-MAC	CM	185.97	379.77	5,452.50	1,504.56	7,522.81
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	32.24	590.65	2,024.97	661.97	3,309.83
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	28.52	650.70	43,223.44	10,975.66	54,878.32
309a	COLD MILLING, 0 - 30 mm	SM	1.02	24.99	8.68	8.67	43.36
309b	COLD MILLING, 0 - 50 mm	SM	1.71	41.65	14.46	14.45	72.27
309c	COLD MILLING, 0 - 70 mm	SM	2.56	62.48	21.69	21.68	108.41
401a1i	CONCRETE CLASS "A1" (Underground)	CM	547.72	1,059.94	3,913.90	1,380.39	6,901.94
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	547.72	1,059.94	4,191.37	1,449.76	7,248.78
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	547.72	1,059.94	4,746.32	1,588.49	7,942.47
401a2i	CONCRETE CLASS "A2" (Underground)	CM	547.72	1,059.94	4,291.90	1,474.89	7,374.44
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	547.72	1,059.94	4,569.37	1,544.26	7,721.28
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	547.72	1,059.94	5,124.32	1,682.99	8,414.97
401a3i	CONCRETE CLASS "A3" (Underground)	CM	547.72	1,059.94	4,669.90	1,569.39	7,846.94
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	547.72	1,059.94	4,947.37	1,638.76	8,193.78
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	547.72	1,059.94	5,502.32	1,777.49	8,887.47
401b	CONCRETE CLASS "B"	CM	725.59	805.93	3,204.57	1,184.02	5,920.11
401ci	CONCRETE CLASS "C" (Underground)	CM	551.28	500.55	3,494.50	1,136.58	5,682.90
401cii	CONCRETE CLASS "C" (On ground)	CM	551.28	500.55	3,612.84	1,166.17	5,830.83
401ciii	CONCRETE CLASS "C" (Elevated)	CM	551.28	500.55	3,849.52	1,225.34	6,126.68
401d	CONCRETE CLASS "D1"	CM	844.68	1,265.57	5,263.98	1,843.56	9,217.79
401e	CONCRETE CLASS "Y"	CM	1,170.00	500.55	4,684.80	1,588.84	7,944.18
401f	LEAN CONCRETE	CM	492.62	507.52	2,476.30	869.11	4,345.54
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,875.31	947.15	4,906.03	1,932.12	9,660.62
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,875.31	947.15	5,662.03	2,121.12	10,605.62
401gii	PRECAST CONCRETE CLASS "B"	CM	1,875.31	947.15	4,727.68	1,887.54	9,437.68
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,875.31	947.15	6,040.03	2,215.62	11,078.12

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,875.31	947.15	6,418.03	2,310.12	11,550.62
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,875.31	947.15	6,796.03	2,404.62	12,023.12
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,634.83	781.47	59,888.00	15,576.07	77,880.37
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,634.83	781.47	67,238.00	17,413.57	87,067.87
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,322.94	5,393.81	55,614.17	15,582.73	77,913.66
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,718.97	15,659.05	133,762.65	38,035.17	190,175.84
405b	LAUNCHING OF GIRDER	TON	64.16	532.52	-	149.17	745.86
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	121.12	-	298.12	104.81	524.06
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	121.12	-	297.62	104.69	523.43
406c	STEEL EXPANSION JOINTS	KG	9.80	26.40	90.14	31.58	157.92
406d	WATER STOPS 6" SIZE	M	108.16	-	464.81	143.24	716.22
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	41.94	-	2,876.22	729.54	3,647.70
406g	STEEL OR METAL BEARING DEVICES	KG	21.32	69.68	116.21	51.80	259.01
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	358.16	1,654.04	793.93	701.53	3,507.66
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	537.24	2,481.06	1,190.89	1,052.30	5,261.49
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	537.24	2,481.06	884.65	975.74	4,878.69
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	895.40	4,135.11	1,047.38	1,519.47	7,597.35
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	767.49	4,884.94	1,201.38	1,713.45	8,567.26
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,343.10	6,909.78	1,330.86	2,395.93	11,979.67
407h	PILE LOAD TEST UP TO 120 TON	EACH	26,481.80	45,769.30	101,690.78	43,485.47	217,427.36
407i	PILE LOAD TEST UP TO 240 TON	EACH	49,743.72	45,769.30	203,381.56	74,723.65	373,618.23
407j	PILE LOAD TEST UP TO 360 TON	EACH	73,005.63	50,188.38	305,072.34	107,066.59	535,332.95
407k	CONFIRMATORY BORING (NX SIZE)	M	216.53	1,582.02	6.37	451.23	2,256.15
410	BRICK WORK	CM	348.53	282.72	2,857.73	872.24	4,361.22
411a	STONE MASONRY RANDOM DRY	CM	306.80	107.96	502.57	229.33	1,146.66
411b	STONE MASONRY RANDOM WITH MORTAR	CM	327.18	166.68	1,583.56	519.35	2,596.77
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	399.25	107.96	559.87	266.77	1,333.84
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	465.85	166.68	1,638.23	567.69	2,838.46

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	73.05	11.74	44.66	32.36	161.82
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	630.37	264.08	1,543.43	609.47	3,047.35
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	258.63	437.48	645.10	335.30	1,676.52
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	252.26	577.19	836.22	416.42	2,082.08
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	243.31	935.96	1,007.38	546.66	2,733.32
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	256.44	1,146.39	1,558.46	740.32	3,701.61
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	292.80	1,078.41	2,201.53	893.19	4,465.93
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	358.02	1,331.30	3,618.58	1,326.98	6,634.88
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	463.33	1,481.41	4,684.51	1,657.31	8,286.56
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	548.05	1,798.85	5,969.56	2,079.12	10,395.58
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	644.07	2,098.66	9,219.65	2,990.60	14,952.98
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	258.63	507.33	665.17	357.78	1,788.92
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	252.26	577.19	783.23	403.17	2,015.84
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	235.93	935.96	958.23	532.53	2,662.65
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	256.44	1,146.39	1,593.11	748.98	3,744.92
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	292.80	1,078.41	3,027.26	1,099.62	5,498.09
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	358.02	1,331.30	4,444.58	1,533.48	7,667.38
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	463.33	1,481.41	6,206.69	2,037.86	10,189.29
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	548.05	1,798.85	8,415.77	2,690.67	13,453.34
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	644.07	2,098.66	11,835.40	3,644.53	18,222.66
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	102.77	118.93	483.20	176.22	881.12
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	823.45	612.95	3,554.57	1,247.74	6,238.70
507a	STEEL WIRE MESH FOR GABIONS	KG	5.43	-	104.56	27.50	137.49
507b	ROCK FILL IN GABIONS	CM	111.51	-	411.26	130.69	653.46
508a	BRICK PAVING (SINGLE COURSE)	SM	118.32	32.70	222.19	93.30	466.50
508b	BRICK PAVING (DOUBLE COURSE)	SM	210.77	32.70	440.46	170.98	854.91
509a	RIP RAP CLASS "A"	CM	507.35	-	407.76	228.78	1,143.89
509b	RIP RAP CLASS "B"	CM	490.18	-	404.50	223.67	1,118.35
509c	RIP RAP CLASS "C"	CM	492.32	-	407.76	225.02	1,125.10

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	619.80	102.14	1,834.90	639.21	3,196.05
509e	GROUTED RIP RAP CLASS "B"	CM	596.44	81.72	1,683.39	590.39	2,951.94
509f	GROUTED RIP RAP CLASS "C"	CM	589.48	68.10	1,729.50	596.77	2,983.85
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	874.04	353.02	4,119.42	1,336.62	6,683.10
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	54.92	191.97	461.73	177.15	885.77
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	117.93	390.69	-	127.16	635.78
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	163.33	67.48	66.26	74.27	371.33
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	209.06	86.37	84.81	95.06	475.30
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	262.34	180.32	369.63	203.07	1,015.37
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	327.93	225.40	462.04	253.84	1,269.21
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	290.49	572.25	2,193.73	764.12	3,820.58
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,026.92	670.54	4,036.37	1,433.46	7,167.29
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	149.64	90.27	426.54	166.61	833.06
603	BRICK EDGING	M	9.74	-	34.56	11.07	55.37
604a	METAL GUARD RAIL	M	19.73	70.84	1,579.36	417.48	2,087.41
604b	METAL GUARD RAIL END PIECES	EACH	27.18	-	1,197.58	306.19	1,530.95
604d	STEEL POST OF METAL GUARD RAIL	EACH	91.10	976.73	3,776.31	1,211.03	6,055.17
605a	CONCRETE BEAM GUARD RAIL	M	82.41	30.82	588.91	175.54	877.68
605c	CONCRETE POST FOR GUARD RAIL	M	101.19	27.36	588.55	179.27	896.37
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	252.06	255.15	6,855.56	1,840.69	9,203.45
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	79.63	382.72	9,257.84	2,430.05	12,150.23
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	252.06	541.89	11,887.00	3,170.23	15,851.17
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	853.83	598.64	20,962.86	5,603.83	28,019.17
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	170.77	119.73	9,218.29	2,377.20	11,885.98
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	282.92	-	1,305.55	397.12	1,985.59
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	282.92	-	1,958.33	560.31	2,801.56
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.18	5.86	17.71	6.69	33.45
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.06	4.03	39.77	11.22	56.08
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.18	5.86	23.64	8.17	40.85

District: Dadu **District Code: 13**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.06	4.03	53.05	14.53	72.67
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	72.59	5.22	171.17	62.24	311.22
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	72.59	9.98	501.20	145.94	729.72
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.98	8.59	24.63	9.30	46.50
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.98	9.63	67.50	20.28	101.40
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.98	6.95	32.84	10.94	54.72
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.98	9.63	90.01	25.90	129.52
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	72.59	3.73	237.83	78.53	392.67
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	72.59	7.90	851.20	232.92	1,164.61
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	61.68	3.73	114.11	44.88	224.40
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	61.68	7.90	334.64	101.05	505.27
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	61.68	3.73	158.55	55.99	279.95
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	61.68	7.90	568.32	159.48	797.38
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	10.67	81.62	193.87	71.54	357.70
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	10.67	81.62	233.87	81.54	407.69
610b	RIGHT OF WAY MARKER	EACH	118.21	121.33	297.96	134.37	671.87
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	672.51	976.31	1,999.01	911.96	4,559.78
610d	TEN KILOMETRE POST	EACH	1,299.87	1,952.61	4,392.57	1,911.26	9,556.32
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	145.76	91.00	950.68	296.86	1,484.30

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

HYDERABAD
(20)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

National Highway Authority
Islamabad

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Hyderabad **District Code: 20**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.82	10.10	-	2.73	13.66
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	8.24	173.32	1.17	45.68	228.40
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	23.70	456.54	2.63	120.72	603.59
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	94.80	1,826.16	10.51	482.87	2,414.34
103	STRIPPING	CM	2.88	93.22	-	24.02	120.12
104	COMPACTION OF NATURAL GROUND	SM	0.41	9.91	0.76	2.77	13.85
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.84	135.76	-	35.15	175.75
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	137.61	316.30	50.82	126.18	630.91
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	19.15	337.99	-	89.29	446.43
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	12.46	262.40	-	68.71	343.57
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.96	120.27	-	31.06	155.29
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	137.61	316.30	50.82	126.18	630.91
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.82	316.03	-	84.46	422.31
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.68	263.92	-	68.40	342.01
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.05	137.60	0.38	36.51	182.54
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	68.73	287.11	70.80	106.66	533.31
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	121.21	427.01	33.88	145.53	727.63
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	102.55	292.53	-	98.77	493.86
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	62.34	238.86	-	75.30	376.50
107d	GRANULAR BACK FILL	CM	37.91	137.14	420.16	148.80	744.02
107e	COMMON BACK FILL	CM	28.78	62.84	5.09	24.18	120.89
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.60	174.71	5.09	46.85	234.25
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	22.45	482.48	54.04	139.74	698.72
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.84	416.71	2.42	108.99	544.96
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	14.97	369.34	-	96.08	480.39
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.75	177.46	7.94	48.54	242.68
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.90	76.32	5.09	22.08	110.39
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	16.23	110.29	3.03	32.39	161.94
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.54	27.34	1.46	7.58	37.91

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.13	18.21	0.77	5.03	25.14
110	IMPROVED SUB-GRADE	CM	11.22	120.02	55.27	46.63	233.14
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.96	15.26	0.79	4.25	21.27
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.42	15.57	0.90	4.47	22.36
201	GRANULAR SUB-BASE	CM	8.82	255.06	523.45	196.83	984.16
202	AGGREGATE BASE	CM	10.23	326.54	761.60	274.59	1,372.97
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	81.43	1,510.17	5,756.72	1,837.08	9,185.39
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	83.93	1,510.17	6,161.82	1,938.98	9,694.89
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	89.77	1,577.28	5,747.06	1,853.53	9,267.64
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	89.77	1,571.31	6,305.03	1,991.53	9,957.63
204b	CEMENT STABILIZED BASE	CM	31.52	569.10	936.26	384.22	1,921.11
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	263.46	915.38	50,716.98	12,973.95	64,869.77
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	263.46	915.38	49,138.85	12,579.42	62,897.11
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	108.83	112.80	866.91	272.13	1,360.67
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	165.05	2,437.94	5,480.54	2,020.88	10,104.41
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	119.74	126.27	734.26	245.07	1,225.34
207a	DEEP PATCHING (0-15 cm)	SM	1.95	45.04	1.26	12.06	60.30
207b	DEEP PATCHING (16-30 cm)	SM	1.95	39.67	1.26	10.72	53.60
208	REINSTATEMENT OF ROAD SURFACE	SM	2.06	57.10	0.56	14.93	74.65
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.37	110.61	0.68	28.41	142.07
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.47	22.12	0.14	5.68	28.41
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.32	1.57	36.00	9.47	47.37
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	40.18	10.52	52.58
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.06	3.94	19.72
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.58	4.57	22.86
304a	SINGLE SURFACE TREATMENT	SM	0.84	7.57	71.14	19.89	99.44
304b	DOUBLE SURFACE TREATMENT	SM	1.22	14.15	137.54	38.23	191.13
304c	TRIPLE SURFACE TREATMENT	SM	2.05	19.94	156.86	44.71	223.56
304d	SEAL COAT	SM	0.77	4.12	50.45	13.83	69.17

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	75.92	1,489.33	6,750.57	2,078.96	10,394.78
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	75.92	1,438.23	7,281.58	2,198.93	10,994.67
307a	DENSE GRADED HOT BIT-MAC	CM	189.47	379.77	5,558.58	1,531.96	7,659.78
307b	OPEN GRADED HOT BIT-MAC	CM	189.47	379.77	5,407.92	1,494.29	7,471.46
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	33.08	590.65	2,007.19	657.73	3,288.66
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	28.88	650.70	42,727.36	10,851.74	54,258.68
309a	COLD MILLING, 0 - 30 mm	SM	1.06	24.99	8.68	8.68	43.41
309b	COLD MILLING, 0 - 50 mm	SM	1.76	41.65	14.46	14.47	72.34
309c	COLD MILLING, 0 - 70 mm	SM	2.64	62.48	21.69	21.70	108.51
401a1i	CONCRETE CLASS "A1" (Underground)	CM	572.32	1,059.94	3,920.87	1,388.28	6,941.40
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	572.32	1,059.94	4,198.34	1,457.65	7,288.24
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	572.32	1,059.94	4,753.28	1,596.38	7,981.92
401a2i	CONCRETE CLASS "A2" (Underground)	CM	572.32	1,059.94	4,298.87	1,482.78	7,413.90
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	572.32	1,059.94	4,576.34	1,552.15	7,760.74
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	572.32	1,059.94	5,131.28	1,690.88	8,454.42
401a3i	CONCRETE CLASS "A3" (Underground)	CM	572.32	1,059.94	4,676.87	1,577.28	7,886.40
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	572.32	1,059.94	4,954.34	1,646.65	8,233.24
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	572.32	1,059.94	5,509.28	1,785.38	8,926.92
401b	CONCRETE CLASS "B"	CM	751.37	805.93	3,157.98	1,178.82	5,894.11
401ci	CONCRETE CLASS "C" (Underground)	CM	571.68	500.55	3,471.22	1,135.86	5,679.31
401cii	CONCRETE CLASS "C" (On ground)	CM	571.68	500.55	3,589.56	1,165.45	5,827.24
401ciii	CONCRETE CLASS "C" (Elevated)	CM	571.68	500.55	3,826.25	1,224.62	6,123.09
401d	CONCRETE CLASS "D1"	CM	882.95	1,265.57	5,263.19	1,852.93	9,264.63
401e	CONCRETE CLASS "Y"	CM	1,220.42	500.55	4,709.33	1,607.57	8,037.87
401f	LEAN CONCRETE	CM	501.52	507.52	2,429.30	859.58	4,297.92
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,934.52	947.15	4,919.96	1,950.41	9,752.04
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,934.52	947.15	5,675.96	2,139.41	10,697.04
401gii	PRECAST CONCRETE CLASS "B"	CM	1,934.52	947.15	4,678.92	1,890.15	9,450.74
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,934.52	947.15	6,053.96	2,233.91	11,169.54

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,934.52	947.15	6,431.96	2,328.41	11,642.04
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,934.52	947.15	6,809.96	2,422.91	12,114.54
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,710.19	781.47	59,358.00	15,462.42	77,312.08
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,710.19	781.47	66,708.00	17,299.92	86,499.58
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,398.64	5,393.81	55,095.35	15,471.95	77,359.76
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,931.85	15,659.05	133,726.75	38,079.41	190,397.06
405b	LAUNCHING OF GIRDER	TON	69.24	532.52	-	150.44	752.20
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	125.40	-	292.22	104.41	522.04
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	125.40	-	292.16	104.39	521.95
406c	STEEL EXPANSION JOINTS	KG	10.29	26.40	89.64	31.58	157.91
406d	WATER STOPS 6" SIZE	M	111.39	-	464.10	143.87	719.37
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	44.04	-	2,875.45	729.87	3,649.36
406g	STEEL OR METAL BEARING DEVICES	KG	22.23	69.68	115.72	51.91	259.54
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	383.10	1,654.04	634.77	667.98	3,339.89
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	574.65	2,481.06	952.16	1,001.97	5,009.83
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	574.65	2,481.06	736.86	948.14	4,740.71
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	957.74	4,135.11	922.51	1,503.84	7,519.20
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	820.92	4,884.94	1,118.36	1,706.06	8,530.28
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,436.62	6,909.78	1,211.86	2,389.56	11,947.82
407h	PILE LOAD TEST UP TO 120 TON	EACH	26,625.96	45,769.30	102,275.98	43,667.81	218,339.06
407i	PILE LOAD TEST UP TO 240 TON	EACH	49,887.88	45,769.30	204,551.96	75,052.28	375,261.42
407j	PILE LOAD TEST UP TO 360 TON	EACH	73,149.79	50,188.38	306,827.94	107,541.53	537,707.64
407k	CONFIRMATORY BORING (NX SIZE)	M	225.01	1,582.02	6.37	453.35	2,266.74
410	BRICK WORK	CM	362.26	282.72	2,844.97	872.49	4,362.43
411a	STONE MASONRY RANDOM DRY	CM	316.63	107.96	476.67	225.31	1,126.57
411b	STONE MASONRY RANDOM WITH MORTAR	CM	338.63	166.68	1,541.70	511.75	2,558.77
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	412.32	107.96	531.88	263.04	1,315.21
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	482.17	166.68	1,598.29	561.78	2,808.92

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	76.33	11.74	44.40	33.12	165.58
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	651.56	264.08	1,503.48	604.78	3,023.91
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	261.34	437.48	644.60	335.86	1,679.29
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	254.81	577.19	835.62	416.90	2,084.52
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	247.08	935.96	1,006.68	547.43	2,737.15
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	259.86	1,146.39	1,557.65	740.97	3,704.87
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	297.59	1,078.41	2,200.72	894.18	4,470.90
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	365.36	1,331.30	3,617.40	1,328.52	6,642.58
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	472.82	1,481.41	4,683.34	1,659.39	8,296.96
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	558.42	1,798.85	5,968.13	2,081.35	10,406.76
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	657.52	2,098.66	9,217.99	2,993.54	14,967.71
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	261.34	507.33	664.18	358.21	1,791.07
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	254.81	577.19	782.63	403.66	2,018.28
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	239.69	935.96	957.53	533.30	2,666.48
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	259.86	1,146.39	1,592.48	749.68	3,748.41
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	297.59	1,078.41	3,026.35	1,100.59	5,502.95
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	365.36	1,331.30	4,443.40	1,535.02	7,675.08
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	472.82	1,481.41	6,205.52	2,039.94	10,199.69
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	558.42	1,798.85	8,414.34	2,692.90	13,464.52
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	657.52	2,098.66	11,833.73	3,647.48	18,237.40
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	103.61	118.93	465.09	171.91	859.54
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	853.01	612.95	3,507.98	1,243.48	6,217.42
507a	STEEL WIRE MESH FOR GABIONS	KG	5.65	-	104.11	27.44	137.20
507b	ROCK FILL IN GABIONS	CM	112.12	-	361.36	118.37	591.86
508a	BRICK PAVING (SINGLE COURSE)	SM	122.10	32.70	222.52	94.33	471.65
508b	BRICK PAVING (DOUBLE COURSE)	SM	217.80	32.70	441.06	172.89	864.45
509a	RIP RAP CLASS "A"	CM	525.27	-	381.86	226.78	1,133.91
509b	RIP RAP CLASS "B"	CM	507.11	-	378.81	221.48	1,107.40
509c	RIP RAP CLASS "C"	CM	509.67	-	381.86	222.88	1,114.42

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	641.72	102.14	2,782.13	881.50	4,407.48
509e	GROUTED RIP RAP CLASS "B"	CM	617.87	81.72	2,532.88	808.12	4,040.58
509f	GROUTED RIP RAP CLASS "C"	CM	610.59	68.10	2,480.77	789.86	3,949.32
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	898.82	353.02	4,075.34	1,331.80	6,658.98
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	55.63	191.97	420.84	167.11	835.56
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	121.84	390.69	-	128.13	640.67
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	168.13	67.48	62.05	74.41	372.07
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	215.20	86.37	79.43	95.25	476.25
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	271.08	180.32	362.68	203.52	1,017.61
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	338.85	225.40	453.35	254.40	1,272.01
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	303.48	572.25	2,197.15	768.22	3,841.10
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,060.13	670.54	4,032.59	1,440.81	7,204.07
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	154.36	90.27	426.11	167.68	838.42
603	BRICK EDGING	M	9.96	-	34.56	11.13	55.65
604a	METAL GUARD RAIL	M	20.63	70.84	1,579.36	417.71	2,088.53
604b	METAL GUARD RAIL END PIECES	EACH	28.36	-	1,197.58	306.48	1,532.42
604d	STEEL POST OF METAL GUARD RAIL	EACH	94.92	976.73	3,776.31	1,211.99	6,059.95
605a	CONCRETE BEAM GUARD RAIL	M	83.96	30.82	587.31	175.53	877.63
605c	CONCRETE POST FOR GUARD RAIL	M	103.09	27.36	586.91	179.34	896.71
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	259.05	255.15	6,844.98	1,839.79	9,198.97
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	81.77	382.72	9,239.86	2,426.09	12,130.44
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	259.05	541.89	11,856.88	3,164.45	15,822.27
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	867.22	598.64	20,912.02	5,594.47	27,972.36
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	173.44	119.73	9,199.97	2,373.29	11,866.43
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	293.47	-	1,303.32	399.20	1,996.00
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	293.47	-	1,954.99	562.12	2,810.58
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.23	5.86	16.16	6.31	31.56
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.08	4.03	39.65	11.19	55.94
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.23	5.86	21.56	7.66	38.31

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.08	4.03	52.88	14.50	72.48
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	76.54	5.22	156.15	59.48	297.39
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	76.54	9.98	499.61	146.53	732.67
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.03	8.59	22.48	8.77	43.87
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.03	9.63	67.50	20.29	101.46
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.03	6.95	29.97	10.24	51.19
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	4.03	9.63	90.01	25.92	129.59
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	76.54	3.73	217.01	74.32	371.60
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	76.54	7.90	851.20	233.91	1,169.55
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	64.77	3.73	104.10	43.15	215.74
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	64.77	7.90	333.58	101.56	507.80
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	64.77	3.73	144.67	53.29	266.46
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	64.77	7.90	568.32	160.25	801.24
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	11.00	81.62	193.85	71.62	358.09
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	11.00	81.62	233.85	81.62	408.08
610b	RIGHT OF WAY MARKER	EACH	119.50	121.33	298.20	134.75	673.77
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	691.01	976.31	1,997.98	916.32	4,581.62
610d	TEN KILOMETRE POST	EACH	1,333.26	1,952.61	4,391.50	1,919.34	9,596.72
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	150.42	91.00	949.33	297.69	1,488.44

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

JACOBABAD
(21)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.78	10.10	-	2.72	13.60
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.99	173.32	1.17	45.62	228.10
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	22.58	456.54	2.63	120.44	602.18
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	90.30	1,826.16	10.51	481.74	2,408.71
103	STRIPPING	CM	2.85	93.22	-	24.02	120.08
104	COMPACTION OF NATURAL GROUND	SM	0.41	9.91	0.76	2.77	13.85
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.24	135.76	-	35.25	176.25
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	130.70	316.30	50.82	124.45	622.27
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.52	337.99	-	88.88	444.39
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.56	262.40	-	68.49	342.44
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.29	120.27	-	31.14	155.70
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	130.70	316.30	50.82	124.45	622.27
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	20.75	316.03	-	84.19	420.97
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.91	263.92	-	68.21	341.04
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.47	137.60	0.38	36.61	183.07
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	66.58	287.11	70.80	106.13	530.63
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	115.25	427.01	33.88	144.04	720.18
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	96.56	292.53	-	97.27	486.37
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	59.27	238.86	-	74.53	372.67
107d	GRANULAR BACK FILL	CM	37.08	137.14	500.08	168.57	842.87
107e	COMMON BACK FILL	CM	26.79	62.84	5.09	23.68	118.40
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.39	174.71	5.09	46.80	233.99
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	21.35	482.48	54.04	139.47	697.34
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.01	416.71	2.42	108.78	543.92
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	14.23	369.34	-	95.89	479.47
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.41	177.46	7.94	48.45	242.26
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.65	76.32	5.09	22.01	110.07
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	15.62	110.29	3.03	32.23	161.17
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.50	27.34	1.46	7.57	37.87

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.12	18.21	0.77	5.03	25.13
110	IMPROVED SUB-GRADE	CM	10.98	120.02	55.27	46.57	232.83
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.94	15.26	0.79	4.25	21.24
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.40	15.57	0.90	4.47	22.34
201	GRANULAR SUB-BASE	CM	8.55	255.06	612.46	219.02	1,095.08
202	AGGREGATE BASE	CM	10.14	326.54	825.41	290.52	1,452.61
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	77.20	1,510.17	5,945.64	1,883.25	9,416.26
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	79.87	1,510.17	6,376.92	1,991.74	9,958.69
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	85.43	1,577.28	5,936.11	1,899.71	9,498.53
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	85.43	1,571.31	6,521.63	2,044.59	10,222.95
204b	CEMENT STABILIZED BASE	CM	32.02	569.10	1,014.73	403.96	2,019.82
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	264.18	915.38	51,789.60	13,242.29	66,211.44
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	264.18	915.38	50,211.47	12,847.76	64,238.78
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	99.18	112.80	1,018.84	307.71	1,538.53
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	160.38	2,437.94	5,709.90	2,077.06	10,385.28
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	108.19	126.27	809.46	260.98	1,304.91
207a	DEEP PATCHING (0-15 cm)	SM	1.97	45.04	1.26	12.07	60.33
207b	DEEP PATCHING (16-30 cm)	SM	1.97	39.67	1.26	10.73	53.63
208	REINSTATEMENT OF ROAD SURFACE	SM	2.02	57.10	0.56	14.92	74.60
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.47	110.61	0.68	28.44	142.20
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.49	22.12	0.14	5.69	28.44
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.33	1.57	36.76	9.66	48.32
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.32	1.57	41.03	10.73	53.65
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.38	4.02	20.12
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.95	4.66	23.32
304a	SINGLE SURFACE TREATMENT	SM	0.85	7.57	73.38	20.45	102.26
304b	DOUBLE SURFACE TREATMENT	SM	1.24	14.15	142.77	39.54	197.71
304c	TRIPLE SURFACE TREATMENT	SM	2.10	19.94	162.87	46.23	231.14
304d	SEAL COAT	SM	0.79	4.12	51.51	14.10	70.52

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	73.07	1,489.33	6,972.84	2,133.81	10,669.04
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	73.07	1,438.23	7,515.30	2,256.65	11,283.25
307a	DENSE GRADED HOT BIT-MAC	CM	181.69	379.77	5,746.38	1,576.96	7,884.81
307b	OPEN GRADED HOT BIT-MAC	CM	181.69	379.77	5,625.44	1,546.73	7,733.64
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	32.55	590.65	2,061.59	671.20	3,355.98
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	28.68	650.70	43,831.84	11,127.81	55,639.03
309a	COLD MILLING, 0 - 30 mm	SM	1.08	24.99	8.68	8.69	43.43
309b	COLD MILLING, 0 - 50 mm	SM	1.80	41.65	14.46	14.48	72.39
309c	COLD MILLING, 0 - 70 mm	SM	2.70	62.48	21.69	21.72	108.58
401a1i	CONCRETE CLASS "A1" (Underground)	CM	554.49	1,059.94	3,928.77	1,385.80	6,929.00
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	554.49	1,059.94	4,206.24	1,455.17	7,275.84
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	554.49	1,059.94	4,761.19	1,593.90	7,969.52
401a2i	CONCRETE CLASS "A2" (Underground)	CM	554.49	1,059.94	4,306.77	1,480.30	7,401.50
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	554.49	1,059.94	4,584.24	1,549.67	7,748.34
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	554.49	1,059.94	5,139.19	1,688.40	8,442.02
401a3i	CONCRETE CLASS "A3" (Underground)	CM	554.49	1,059.94	4,684.77	1,574.80	7,874.00
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	554.49	1,059.94	4,962.24	1,644.17	8,220.84
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	554.49	1,059.94	5,517.19	1,782.90	8,914.52
401b	CONCRETE CLASS "B"	CM	734.66	805.93	3,229.09	1,192.42	5,962.10
401ci	CONCRETE CLASS "C" (Underground)	CM	545.80	500.55	3,534.85	1,145.30	5,726.50
401cii	CONCRETE CLASS "C" (On ground)	CM	545.80	500.55	3,653.19	1,174.88	5,874.42
401ciii	CONCRETE CLASS "C" (Elevated)	CM	545.80	500.55	3,889.87	1,234.06	6,170.28
401d	CONCRETE CLASS "D1"	CM	840.03	1,265.57	5,280.58	1,846.54	9,232.72
401e	CONCRETE CLASS "Y"	CM	1,137.92	500.55	4,694.01	1,583.12	7,915.59
401f	LEAN CONCRETE	CM	472.43	507.52	2,499.68	869.90	4,349.52
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,817.21	947.15	4,921.42	1,921.45	9,607.23
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,817.21	947.15	5,677.42	2,110.45	10,552.23
401gii	PRECAST CONCRETE CLASS "B"	CM	1,817.21	947.15	4,763.63	1,882.00	9,409.99
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,817.21	947.15	6,055.42	2,204.95	11,024.73

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,817.21	947.15	6,433.42	2,299.45	11,497.23
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,817.21	947.15	6,811.42	2,393.95	11,969.73
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,640.35	781.47	59,888.00	15,577.45	77,887.27
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,640.35	781.47	67,238.00	17,414.95	87,074.77
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,330.00	5,393.81	55,712.41	15,609.06	78,045.29
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,785.34	15,659.05	133,749.20	38,048.40	190,241.99
405b	LAUNCHING OF GIRDER	TON	64.84	532.52	-	149.34	746.70
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	118.12	-	304.95	105.77	528.84
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	118.12	-	303.95	105.52	527.59
406c	STEEL EXPANSION JOINTS	KG	9.54	26.40	89.99	31.48	157.40
406d	WATER STOPS 6" SIZE	M	107.59	-	465.59	143.30	716.48
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	42.28	-	2,889.49	732.94	3,664.71
406g	STEEL OR METAL BEARING DEVICES	KG	20.89	69.68	116.11	51.67	258.35
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	356.77	1,654.04	806.66	704.37	3,521.83
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	535.15	2,481.06	1,209.99	1,056.55	5,282.75
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	535.15	2,481.06	904.05	980.06	4,900.32
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	891.91	4,135.11	1,079.71	1,526.68	7,633.41
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	764.50	4,884.94	1,254.66	1,726.03	8,630.13
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,337.87	6,909.78	1,379.36	2,406.75	12,033.76
407h	PILE LOAD TEST UP TO 120 TON	EACH	24,304.75	45,769.30	99,547.10	42,405.29	212,026.45
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,984.05	45,769.30	199,094.20	72,461.89	362,309.45
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,663.35	50,188.38	298,641.30	103,623.26	518,116.30
407k	CONFIRMATORY BORING (NX SIZE)	M	203.74	1,582.02	6.37	448.03	2,240.16
410	BRICK WORK	CM	339.30	282.72	2,760.94	845.74	4,228.70
411a	STONE MASONRY RANDOM DRY	CM	298.91	107.96	537.57	236.11	1,180.55
411b	STONE MASONRY RANDOM WITH MORTAR	CM	319.97	166.68	1,560.08	511.68	2,558.41
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	386.99	107.96	597.65	273.15	1,365.75
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	452.09	166.68	1,632.16	562.73	2,813.67

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	71.13	11.74	43.68	31.64	158.20
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	607.19	264.08	1,537.35	602.16	3,010.78
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	241.72	437.48	643.28	330.62	1,653.10
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	234.56	577.19	834.03	411.44	2,057.21
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	232.08	935.96	1,004.82	543.21	2,716.07
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	242.31	1,146.39	1,555.47	736.04	3,680.21
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	278.40	1,078.41	2,198.54	888.84	4,444.20
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	343.36	1,331.30	3,614.26	1,322.23	6,611.15
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	444.35	1,481.41	4,680.21	1,651.49	8,257.46
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	524.52	1,798.85	5,964.34	2,071.93	10,359.64
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	617.24	2,098.66	9,213.56	2,982.36	14,911.82
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	241.72	507.33	661.52	352.64	1,763.22
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	234.56	577.19	781.04	398.20	1,990.98
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	224.73	935.96	955.67	529.09	2,645.45
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	242.31	1,146.39	1,590.78	744.87	3,724.36
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	278.40	1,078.41	3,023.94	1,095.19	5,475.94
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	343.36	1,331.30	4,440.26	1,528.73	7,643.65
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	444.35	1,481.41	6,202.39	2,032.04	10,160.19
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	524.52	1,798.85	8,410.55	2,683.48	13,417.40
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	617.24	2,098.66	11,829.30	3,636.30	18,181.51
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	98.27	118.93	388.16	151.34	756.70
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	829.91	612.95	3,579.09	1,255.49	6,277.43
507a	STEEL WIRE MESH FOR GABIONS	KG	5.35	-	104.07	27.36	136.78
507b	ROCK FILL IN GABIONS	CM	104.04	-	324.19	107.06	535.29
508a	BRICK PAVING (SINGLE COURSE)	SM	113.65	32.70	215.32	90.42	452.08
508b	BRICK PAVING (DOUBLE COURSE)	SM	201.73	32.70	426.97	165.35	826.74
509a	RIP RAP CLASS "A"	CM	489.92	-	442.76	233.17	1,165.86
509b	RIP RAP CLASS "B"	CM	471.59	-	439.22	227.70	1,138.52
509c	RIP RAP CLASS "C"	CM	473.41	-	442.76	229.04	1,145.22

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	597.85	102.14	1,833.35	633.34	3,166.68
509e	GROUTED RIP RAP CLASS "B"	CM	574.79	81.72	1,685.36	585.47	2,927.33
509f	GROUTED RIP RAP CLASS "C"	CM	567.07	68.10	1,730.38	591.39	2,956.93
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	849.35	353.02	4,142.79	1,336.29	6,681.45
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	51.81	191.97	500.07	185.96	929.82
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	111.36	390.69	-	125.51	627.57
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	158.01	67.48	71.95	74.36	371.79
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	202.25	86.37	92.09	95.18	475.90
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	254.34	180.32	366.13	200.20	1,000.99
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	317.92	225.40	457.67	250.25	1,251.24
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	293.92	572.25	2,201.71	766.97	3,834.85
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	996.46	670.54	4,044.37	1,427.84	7,139.21
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	145.33	90.27	428.20	165.95	829.75
603	BRICK EDGING	M	9.39	-	33.60	10.75	53.73
604a	METAL GUARD RAIL	M	19.71	70.84	1,579.36	417.48	2,087.39
604b	METAL GUARD RAIL END PIECES	EACH	25.83	-	1,197.58	305.85	1,529.26
604d	STEEL POST OF METAL GUARD RAIL	EACH	93.00	976.73	3,776.31	1,211.51	6,057.55
605a	CONCRETE BEAM GUARD RAIL	M	76.91	30.82	589.62	174.34	871.70
605c	CONCRETE POST FOR GUARD RAIL	M	94.44	27.36	589.37	177.79	888.96
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	242.20	255.15	6,874.06	1,842.85	9,214.26
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	78.02	382.72	9,272.73	2,433.37	12,166.84
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	242.20	541.89	11,909.02	3,173.28	15,866.38
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	788.38	598.64	21,002.93	5,597.49	27,987.43
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	157.68	119.73	9,234.75	2,378.04	11,890.19
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	286.88	-	1,308.09	398.74	1,993.71
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	286.88	-	1,962.13	562.25	2,811.27
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.12	5.86	16.19	6.29	31.46
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.04	4.03	39.93	11.25	56.25
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.12	5.86	21.60	7.64	38.22

District: Jacobabad **District Code: 21**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.04	4.03	53.26	14.58	72.91
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	69.58	5.22	156.44	57.81	289.04
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	69.58	9.98	503.19	145.69	728.44
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.90	8.59	22.51	8.75	43.74
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.90	9.63	67.50	20.26	101.29
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.90	6.95	30.01	10.21	51.07
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.90	9.63	90.01	25.88	129.42
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	69.58	3.73	217.29	72.65	363.25
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	69.58	7.90	851.20	232.17	1,160.85
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	59.24	3.73	104.29	41.81	209.07
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	59.24	7.90	335.96	100.78	503.88
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	59.24	3.73	144.86	51.96	259.78
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	59.24	7.90	568.32	158.87	794.33
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	10.73	81.62	193.79	71.54	357.68
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	10.73	81.62	233.79	81.53	407.67
610b	RIGHT OF WAY MARKER	EACH	109.57	121.33	298.60	132.37	661.87
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	631.87	976.31	2,002.32	902.63	4,513.13
610d	TEN KILOMETRE POST	EACH	1,213.96	1,952.61	4,402.65	1,892.31	9,461.54
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	141.34	91.00	951.68	296.01	1,480.03

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

KARACHI
(26)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	1.14	10.10	-	2.81	14.05
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	11.39	173.32	1.17	46.47	232.35
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	32.74	456.54	2.63	122.98	614.88
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	130.94	1,826.16	10.51	491.90	2,459.51
103	STRIPPING	CM	3.97	93.22	-	24.30	121.48
104	COMPACTION OF NATURAL GROUND	SM	0.57	9.91	0.76	2.81	14.04
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	6.73	135.76	-	35.62	178.12
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	185.54	316.30	50.82	138.17	690.83
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	25.39	337.99	-	90.85	454.23
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	16.43	262.40	-	69.71	348.54
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	5.51	120.27	-	31.45	157.23
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	185.54	316.30	50.82	138.17	690.83
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	29.41	316.03	-	86.36	431.81
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	12.82	263.92	-	69.19	345.93
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	10.99	137.60	0.38	37.24	186.22
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	94.35	287.11	70.80	113.07	565.34
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	163.41	427.01	33.88	156.08	780.38
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	137.80	292.53	-	107.58	537.92
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	84.04	238.86	-	80.73	403.63
107d	GRANULAR BACK FILL	CM	52.07	137.14	457.70	161.73	808.64
107e	COMMON BACK FILL	CM	39.84	62.84	5.09	26.94	134.71
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	10.15	174.71	5.09	47.49	237.44
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	30.23	482.48	54.04	141.69	708.44
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	22.67	416.71	2.42	110.45	552.25
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	20.15	369.34	-	97.37	486.87
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	11.73	177.46	7.94	49.28	246.41
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	9.25	76.32	5.09	22.66	113.32
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	21.95	110.29	3.03	33.82	169.09
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	2.08	27.34	1.46	7.72	38.59

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.53	18.21	0.77	5.13	25.64
110	IMPROVED SUB-GRADE	CM	15.18	120.02	55.27	47.62	238.08
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.32	15.26	0.79	4.34	21.71
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.92	15.57	0.90	4.60	22.98
201	GRANULAR SUB-BASE	CM	11.80	255.06	545.17	203.01	1,015.04
202	AGGREGATE BASE	CM	13.73	326.54	898.87	309.79	1,548.93
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	110.49	1,510.17	5,786.83	1,851.87	9,259.35
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	113.73	1,510.17	6,213.16	1,959.26	9,796.32
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	121.38	1,577.28	5,777.51	1,869.04	9,345.22
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	121.38	1,571.31	6,355.44	2,012.03	10,060.16
204b	CEMENT STABILIZED BASE	CM	42.44	569.10	984.45	399.00	1,994.99
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	356.69	915.38	50,350.35	12,905.60	64,528.02
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	356.69	915.38	48,772.22	12,511.07	62,555.36
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	149.27	112.80	1,033.06	323.78	1,618.92
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	222.59	2,437.94	5,574.15	2,058.67	10,293.35
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	164.03	126.27	806.00	274.08	1,370.39
207a	DEEP PATCHING (0-15 cm)	SM	2.63	45.04	1.26	12.23	61.15
207b	DEEP PATCHING (16-30 cm)	SM	2.63	39.67	1.26	10.89	54.45
208	REINSTATEMENT OF ROAD SURFACE	SM	2.79	57.10	0.56	15.11	75.56
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	3.24	110.61	0.68	28.63	143.16
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.65	22.12	0.14	5.73	28.63
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.44	1.57	35.74	9.44	47.19
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.42	1.57	39.89	10.47	52.36
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.18	0.58	14.96	3.93	19.64
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.18	0.58	17.45	4.55	22.75
304a	SINGLE SURFACE TREATMENT	SM	1.13	7.57	71.07	19.94	99.71
304b	DOUBLE SURFACE TREATMENT	SM	1.64	14.15	138.14	38.48	192.41
304c	TRIPLE SURFACE TREATMENT	SM	2.76	19.94	157.55	45.06	225.31
304d	SEAL COAT	SM	1.04	4.12	50.02	13.79	68.97

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	102.59	1,489.33	6,790.33	2,095.56	10,477.81
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	102.59	1,438.23	7,321.86	2,215.67	11,078.35
307a	DENSE GRADED HOT BIT-MAC	CM	256.74	379.77	5,573.12	1,552.41	7,762.04
307b	OPEN GRADED HOT BIT-MAC	CM	256.74	379.77	5,458.36	1,523.72	7,618.59
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	44.98	590.65	2,021.29	664.23	3,321.14
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	40.36	650.70	42,349.84	10,760.22	53,801.12
309a	COLD MILLING, 0 - 30 mm	SM	1.44	24.99	8.68	8.78	43.88
309b	COLD MILLING, 0 - 50 mm	SM	2.39	41.65	14.46	14.63	73.14
309c	COLD MILLING, 0 - 70 mm	SM	3.59	62.48	21.69	21.94	109.70
401a1i	CONCRETE CLASS "A1" (Underground)	CM	790.42	1,059.94	3,955.94	1,451.57	7,257.86
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	790.42	1,059.94	4,233.41	1,520.94	7,604.70
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	790.42	1,059.94	4,788.35	1,659.68	8,298.38
401a2i	CONCRETE CLASS "A2" (Underground)	CM	790.42	1,059.94	4,333.94	1,546.07	7,730.36
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	790.42	1,059.94	4,611.41	1,615.44	8,077.20
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	790.42	1,059.94	5,166.35	1,754.18	8,770.88
401a3i	CONCRETE CLASS "A3" (Underground)	CM	790.42	1,059.94	4,711.94	1,640.57	8,202.86
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	790.42	1,059.94	4,989.41	1,709.94	8,549.70
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	790.42	1,059.94	5,544.35	1,848.68	9,243.38
401b	CONCRETE CLASS "B"	CM	1,026.75	805.93	3,256.23	1,272.23	6,361.14
401ci	CONCRETE CLASS "C" (Underground)	CM	789.15	500.55	3,563.37	1,213.27	6,066.33
401cii	CONCRETE CLASS "C" (On ground)	CM	789.15	500.55	3,681.71	1,242.85	6,214.26
401ciii	CONCRETE CLASS "C" (Elevated)	CM	789.15	500.55	3,918.39	1,302.02	6,510.11
401d	CONCRETE CLASS "D1"	CM	1,236.05	1,265.57	5,309.47	1,952.77	9,763.86
401e	CONCRETE CLASS "Y"	CM	1,712.90	500.55	4,719.57	1,733.25	8,666.27
401f	LEAN CONCRETE	CM	689.94	507.52	2,527.83	931.32	4,656.60
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	2,670.22	947.15	4,951.91	2,142.32	10,711.59
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	2,670.22	947.15	5,707.91	2,331.32	11,656.59
401gii	PRECAST CONCRETE CLASS "B"	CM	2,670.22	947.15	4,788.06	2,101.36	10,506.79
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	2,670.22	947.15	6,085.91	2,425.82	12,129.09

District: Karachi District Code: 26

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	2,670.22	947.15	6,463.91	2,520.32	12,601.59
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	2,670.22	947.15	6,841.91	2,614.82	13,074.09
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	2,424.25	781.47	59,358.00	15,640.93	78,204.65
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	2,424.25	781.47	66,708.00	17,478.43	87,392.15
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,923.70	5,393.81	55,024.50	15,585.50	77,927.52
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	3,766.95	15,659.05	133,928.68	38,338.67	191,693.35
405b	LAUNCHING OF GIRDER	TON	88.86	532.52	-	155.35	776.73
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	174.94	-	287.50	115.61	578.05
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	174.94	-	287.76	115.67	578.37
406c	STEEL EXPANSION JOINTS	KG	14.09	26.40	89.76	32.56	162.80
406d	WATER STOPS 6" SIZE	M	157.98	-	463.56	155.38	776.92
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.54	2.69
406f	ASPHALT FELT (3 PLY)	SM	58.13	-	2,881.89	735.01	3,675.03
406g	STEEL OR METAL BEARING DEVICES	KG	29.39	69.68	115.78	53.71	268.56
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	497.39	1,654.04	628.25	694.92	3,474.60
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	746.09	2,481.06	942.37	1,042.38	5,211.90
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	746.09	2,481.06	727.39	988.64	4,943.18
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	1,243.49	4,135.11	907.30	1,571.47	7,857.36
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	1,065.84	4,884.94	1,093.68	1,761.12	8,805.58
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,865.23	6,909.78	1,189.37	2,491.09	12,455.47
407h	PILE LOAD TEST UP TO 120 TON	EACH	36,500.96	45,769.30	103,834.46	46,526.18	232,630.90
407i	PILE LOAD TEST UP TO 240 TON	EACH	68,494.88	45,769.30	207,668.91	80,483.27	402,416.37
407j	PILE LOAD TEST UP TO 360 TON	EACH	100,488.80	50,188.38	311,503.37	115,545.14	577,725.69
407k	CONFIRMATORY BORING (NX SIZE)	M	297.43	1,582.02	6.36	471.46	2,357.28
410	BRICK WORK	CM	484.80	282.72	2,792.13	889.91	4,449.57
411a	STONE MASONRY RANDOM DRY	CM	425.39	107.96	506.06	259.85	1,299.27
411b	STONE MASONRY RANDOM WITH MORTAR	CM	453.93	166.68	1,567.55	547.04	2,735.19
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	553.55	107.96	563.63	306.29	1,531.44
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	646.17	166.68	1,627.38	610.06	3,050.28

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	101.58	11.74	44.34	39.41	197.07
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	873.96	264.08	1,532.57	667.65	3,338.27
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	358.49	437.48	644.49	360.12	1,800.58
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	349.21	577.19	835.49	440.47	2,202.36
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	336.52	935.96	1,006.53	569.75	2,848.75
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	354.40	1,146.39	1,557.46	764.56	3,822.82
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	405.19	1,078.41	2,200.53	921.03	4,605.17
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	495.85	1,331.30	3,617.14	1,361.07	6,805.36
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	641.69	1,481.41	4,683.08	1,701.54	8,507.72
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	758.81	1,798.85	5,967.82	2,131.37	10,656.85
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	891.90	2,098.66	9,217.62	3,052.04	15,260.22
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	358.49	507.33	663.96	382.44	1,912.22
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	349.21	577.19	782.50	427.22	2,136.12
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	326.22	935.96	957.38	554.89	2,774.45
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	354.40	1,146.39	1,592.33	773.28	3,866.40
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	405.19	1,078.41	3,026.15	1,127.44	5,637.19
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	495.85	1,331.30	4,443.14	1,567.57	7,837.86
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	641.69	1,481.41	6,205.26	2,082.09	10,410.44
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	758.81	1,798.85	8,414.03	2,742.92	13,714.61
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	891.90	2,098.66	11,833.36	3,705.98	18,529.90
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	143.21	118.93	499.27	190.35	951.75
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	1,178.46	612.95	3,606.23	1,349.41	6,747.04
507a	STEEL WIRE MESH FOR GABIONS	KG	7.90	-	104.11	28.00	140.01
507b	ROCK FILL IN GABIONS	CM	154.54	-	391.32	136.47	682.33
508a	BRICK PAVING (SINGLE COURSE)	SM	164.21	32.70	217.75	103.67	518.33
508b	BRICK PAVING (DOUBLE COURSE)	SM	292.37	32.70	431.35	189.11	945.53
509a	RIP RAP CLASS "A"	CM	705.03	-	411.25	279.07	1,395.35
509b	RIP RAP CLASS "B"	CM	680.77	-	407.96	272.18	1,360.92
509c	RIP RAP CLASS "C"	CM	683.62	-	411.25	273.72	1,368.59

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	861.13	102.14	1,826.14	697.35	3,486.77
509e	GROUTED RIP RAP CLASS "B"	CM	828.47	81.72	1,675.89	646.52	3,232.59
509f	GROUTED RIP RAP CLASS "C"	CM	818.56	68.10	1,721.57	652.05	3,260.27
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	1,221.05	353.02	4,178.07	1,438.04	7,190.18
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	75.93	191.97	458.31	181.55	907.76
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	164.19	390.69	-	138.72	693.61
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	226.82	67.48	66.83	90.28	451.41
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	290.33	86.37	85.54	115.56	577.80
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	364.42	180.32	366.36	227.78	1,138.88
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	455.53	225.40	457.95	284.72	1,423.60
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	419.16	572.25	2,215.25	801.66	4,008.32
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,463.63	670.54	4,049.20	1,545.84	7,729.21
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	212.60	90.27	431.27	183.53	917.66
603	BRICK EDGING	M	13.52	-	33.60	11.78	58.89
604a	METAL GUARD RAIL	M	27.43	70.84	1,579.41	419.42	2,097.11
604b	METAL GUARD RAIL END PIECES	EACH	37.88	-	1,197.61	308.87	1,544.37
604d	STEEL POST OF METAL GUARD RAIL	EACH	127.70	976.73	3,776.44	1,220.22	6,101.08
605a	CONCRETE BEAM GUARD RAIL	M	115.91	30.82	588.50	183.81	919.05
605c	CONCRETE POST FOR GUARD RAIL	M	142.32	27.36	588.30	189.50	947.48
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	351.37	255.15	6,855.65	1,865.54	9,327.71
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	109.73	382.72	9,255.41	2,436.97	12,184.84
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	351.37	541.89	11,883.13	3,194.10	15,970.48
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	1,188.46	598.64	20,946.40	5,683.37	28,416.87
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	237.69	119.73	9,200.86	2,389.57	11,947.85
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	416.99	-	1,301.53	429.63	2,148.15
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	416.99	-	1,952.29	592.32	2,961.61
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.40	5.86	16.15	6.60	33.02
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.47	4.03	39.54	11.26	56.30
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.40	5.86	21.55	7.95	39.77

District: Karachi **District Code: 26**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.47	4.03	52.74	14.56	72.80
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	109.51	5.22	156.06	67.70	338.49
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	109.51	9.98	498.32	154.45	772.27
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	5.50	8.59	22.47	9.14	45.70
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	5.50	9.63	67.51	20.66	103.30
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	5.50	6.95	29.96	10.60	53.01
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	5.50	9.63	90.01	26.29	131.43
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	109.51	3.73	216.92	82.54	412.70
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	109.51	7.90	851.21	242.16	1,210.78
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	92.39	3.73	104.04	50.04	250.20
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	92.39	7.90	332.71	108.25	541.25
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	92.39	3.73	144.61	60.18	300.91
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	92.39	7.90	568.33	167.16	835.78
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	14.63	81.62	193.84	72.52	362.61
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	14.63	81.62	233.84	82.52	412.61
610b	RIGHT OF WAY MARKER	EACH	164.72	121.33	299.39	146.36	731.80
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	955.22	976.31	2,007.85	984.84	4,924.21
610d	TEN KILOMETRE POST	EACH	1,853.37	1,952.61	4,411.09	2,054.27	10,271.34
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	203.77	91.00	952.81	311.90	1,559.48

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

KHAIRPUR
(29)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.65	10.10	-	2.69	13.44
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.86	173.32	1.17	45.34	226.69
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.15	456.54	2.63	119.58	597.90
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	76.60	1,826.16	10.51	478.32	2,391.59
103	STRIPPING	CM	2.48	93.22	-	23.92	119.62
104	COMPACTION OF NATURAL GROUND	SM	0.36	9.91	0.76	2.76	13.78
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.89	135.76	-	35.16	175.81
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	131.75	316.30	50.82	124.72	623.59
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.84	337.99	-	88.96	444.79
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.79	262.40	-	68.55	342.73
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.00	120.27	-	31.07	155.34
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	131.75	316.30	50.82	124.72	623.59
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	20.99	316.03	-	84.25	421.27
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.08	263.92	-	68.25	341.26
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.82	137.60	0.38	36.45	182.25
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	61.92	287.11	70.80	104.96	524.80
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	116.59	427.01	33.88	144.37	721.86
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	98.30	292.53	-	97.71	488.54
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	59.96	238.86	-	74.71	373.53
107d	GRANULAR BACK FILL	CM	32.88	137.14	431.15	150.29	751.47
107e	COMMON BACK FILL	CM	22.38	62.84	5.09	22.58	112.88
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.23	174.71	5.09	46.76	233.78
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.46	482.48	54.04	139.25	696.23
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.35	416.71	2.42	108.62	543.10
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.64	369.34	-	95.75	478.73
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.05	177.46	7.94	48.36	241.81
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.48	76.32	5.09	21.97	109.86
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.40	110.29	3.03	31.93	159.64
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.43	27.34	1.46	7.56	37.78

District: Khairpur **District Code: 29**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.05	18.21	0.77	5.01	25.04
110	IMPROVED SUB-GRADE	CM	10.16	120.02	55.26	46.36	231.80
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.85	15.26	0.79	4.23	21.13
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.28	15.57	0.90	4.44	22.18
201	GRANULAR SUB-BASE	CM	8.24	255.06	515.99	194.82	974.10
202	AGGREGATE BASE	CM	9.93	326.54	723.95	265.11	1,325.53
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	67.14	1,510.17	5,797.38	1,843.67	9,218.36
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	69.84	1,510.17	6,226.78	1,951.70	9,758.48
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	75.07	1,577.28	5,787.64	1,860.00	9,300.00
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	75.07	1,571.31	6,371.30	2,004.42	10,022.11
204b	CEMENT STABILIZED BASE	CM	29.59	569.10	892.05	372.69	1,863.44
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	246.14	915.38	51,468.42	13,157.48	65,787.42
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	246.14	915.38	49,890.29	12,762.95	63,814.75
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	82.92	112.80	897.87	273.40	1,366.99
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	143.11	2,437.94	5,551.53	2,033.15	10,165.73
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	90.79	126.27	705.32	230.59	1,152.97
207a	DEEP PATCHING (0-15 cm)	SM	1.81	45.04	1.26	12.02	60.12
207b	DEEP PATCHING (16-30 cm)	SM	1.81	39.67	1.26	10.68	53.42
208	REINSTATEMENT OF ROAD SURFACE	SM	1.96	57.10	0.56	14.90	74.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.28	110.61	0.68	28.39	141.97
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.46	22.12	0.14	5.68	28.39
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	36.53	9.60	48.01
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.78	10.66	53.31
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.29	4.00	19.99
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.84	4.63	23.17
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	72.31	20.17	100.87
304b	DOUBLE SURFACE TREATMENT	SM	1.18	14.15	140.08	38.85	194.26
304c	TRIPLE SURFACE TREATMENT	SM	1.99	19.94	159.74	45.42	227.09
304d	SEAL COAT	SM	0.75	4.12	50.97	13.96	69.80

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	64.63	1,489.33	6,815.20	2,092.29	10,461.45
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	64.63	1,438.23	7,348.87	2,212.93	11,064.66
307a	DENSE GRADED HOT BIT-MAC	CM	158.01	379.77	5,605.44	1,535.80	7,679.02
307b	OPEN GRADED HOT BIT-MAC	CM	158.01	379.77	5,479.04	1,504.21	7,521.03
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.79	590.65	2,031.38	662.45	3,312.27
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	25.04	650.70	43,501.12	11,044.21	55,221.07
309a	COLD MILLING, 0 - 30 mm	SM	0.98	24.99	8.68	8.66	43.32
309b	COLD MILLING, 0 - 50 mm	SM	1.64	41.65	14.46	14.44	72.19
309c	COLD MILLING, 0 - 70 mm	SM	2.46	62.48	21.69	21.66	108.29
401a1i	CONCRETE CLASS "A1" (Underground)	CM	521.17	1,059.94	3,845.73	1,356.71	6,783.55
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	521.17	1,059.94	4,123.20	1,426.08	7,130.40
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	521.17	1,059.94	4,678.15	1,564.82	7,824.08
401a2i	CONCRETE CLASS "A2" (Underground)	CM	521.17	1,059.94	4,223.73	1,451.21	7,256.05
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	521.17	1,059.94	4,501.20	1,520.58	7,602.90
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	521.17	1,059.94	5,056.15	1,659.32	8,296.58
401a3i	CONCRETE CLASS "A3" (Underground)	CM	521.17	1,059.94	4,601.73	1,545.71	7,728.55
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	521.17	1,059.94	4,879.20	1,615.08	8,075.40
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	521.17	1,059.94	5,434.15	1,753.82	8,769.08
401b	CONCRETE CLASS "B"	CM	674.31	805.93	3,130.86	1,152.78	5,763.88
401ci	CONCRETE CLASS "C" (Underground)	CM	502.68	500.55	3,424.33	1,106.89	5,534.44
401cii	CONCRETE CLASS "C" (On ground)	CM	502.68	500.55	3,542.67	1,136.47	5,682.37
401ciii	CONCRETE CLASS "C" (Elevated)	CM	502.68	500.55	3,779.35	1,195.64	5,978.22
401d	CONCRETE CLASS "D1"	CM	793.31	1,265.57	5,201.98	1,815.21	9,076.07
401e	CONCRETE CLASS "Y"	CM	1,079.75	500.55	4,623.11	1,550.85	7,754.26
401f	LEAN CONCRETE	CM	411.12	507.52	2,402.92	830.39	4,151.95
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,665.68	947.15	4,831.58	1,861.10	9,305.50
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,665.68	947.15	5,587.58	2,050.10	10,250.50
401gii	PRECAST CONCRETE CLASS "B"	CM	1,665.68	947.15	4,653.44	1,816.57	9,082.84
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,665.68	947.15	5,965.58	2,144.60	10,723.00

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,665.68	947.15	6,343.58	2,239.10	11,195.50
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,665.68	947.15	6,721.58	2,333.60	11,668.00
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,543.85	781.47	59,888.00	15,553.33	77,766.66
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,543.85	781.47	67,238.00	17,390.83	86,954.16
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,267.09	5,393.81	55,704.11	15,591.25	77,956.27
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,590.62	15,659.05	133,782.40	38,008.02	190,040.09
405b	LAUNCHING OF GIRDER	TON	59.43	532.52	-	147.99	739.94
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	109.67	-	304.12	103.45	517.24
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	109.67	-	297.63	101.83	509.13
406c	STEEL EXPANSION JOINTS	KG	9.06	26.40	90.04	31.37	156.86
406d	WATER STOPS 6" SIZE	M	94.29	-	465.54	139.96	699.79
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	42.62	-	2,888.25	732.72	3,663.59
406g	STEEL OR METAL BEARING DEVICES	KG	19.72	69.68	116.15	51.39	256.94
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	319.07	1,654.04	711.14	671.06	3,355.32
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	478.61	2,481.06	1,066.72	1,006.60	5,032.98
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	478.61	2,481.06	806.39	941.51	4,707.57
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	797.68	4,135.11	977.95	1,477.68	7,388.42
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	683.73	4,884.94	1,146.58	1,678.81	8,394.06
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,196.52	6,909.78	1,261.03	2,341.83	11,709.16
407h	PILE LOAD TEST UP TO 120 TON	EACH	20,324.40	45,769.30	101,691.66	41,946.34	209,731.71
407i	PILE LOAD TEST UP TO 240 TON	EACH	37,016.88	45,769.30	203,383.32	71,542.38	357,711.88
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,709.36	50,188.38	305,074.98	102,243.18	511,215.91
407k	CONFIRMATORY BORING (NX SIZE)	M	175.98	1,582.02	6.37	441.09	2,205.46
410	BRICK WORK	CM	326.60	282.72	2,760.94	842.57	4,212.83
411a	STONE MASONRY RANDOM DRY	CM	278.31	107.96	399.44	196.43	982.15
411b	STONE MASONRY RANDOM WITH MORTAR	CM	301.50	166.68	1,421.95	472.53	2,362.66
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	361.78	107.96	448.49	229.56	1,147.79
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	426.69	166.68	1,483.00	519.09	2,595.47

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	69.95	11.74	43.68	31.34	156.72
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	570.43	264.08	1,388.19	555.68	2,778.39
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	206.22	437.48	643.28	321.75	1,608.73
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	199.59	577.19	834.03	402.70	2,013.51
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	202.88	935.96	1,004.82	535.92	2,679.58
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	209.73	1,146.39	1,555.47	727.90	3,639.48
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	241.93	1,078.41	2,198.54	879.72	4,398.60
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	302.33	1,331.30	3,614.26	1,311.97	6,559.87
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	391.26	1,481.41	4,680.21	1,638.22	8,191.10
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	458.54	1,798.85	5,964.34	2,055.43	10,277.16
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	545.45	2,098.66	9,213.56	2,964.42	14,822.08
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	206.22	507.33	661.52	343.77	1,718.84
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	199.59	577.19	781.04	389.45	1,947.27
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	197.58	935.96	955.67	522.30	2,611.51
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	209.73	1,146.39	1,590.78	736.73	3,683.63
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	241.93	1,078.41	3,023.94	1,086.07	5,430.35
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	302.33	1,331.30	4,440.26	1,518.47	7,592.37
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	391.26	1,481.41	6,202.39	2,018.76	10,093.82
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	458.54	1,798.85	8,410.55	2,666.98	13,334.92
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	545.45	2,098.66	11,829.30	3,618.35	18,091.76
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	83.17	118.93	404.25	151.59	757.93
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	755.74	612.95	3,480.86	1,212.39	6,061.94
507a	STEEL WIRE MESH FOR GABIONS	KG	5.07	-	104.32	27.35	136.74
507b	ROCK FILL IN GABIONS	CM	86.69	-	324.15	102.71	513.55
508a	BRICK PAVING (SINGLE COURSE)	SM	105.73	32.70	216.54	88.74	443.70
508b	BRICK PAVING (DOUBLE COURSE)	SM	189.19	32.70	429.16	162.76	813.82
509a	RIP RAP CLASS "A"	CM	463.05	-	304.64	191.92	959.61
509b	RIP RAP CLASS "B"	CM	444.63	-	302.20	186.71	933.54
509c	RIP RAP CLASS "C"	CM	447.81	-	304.64	188.11	940.55

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	564.23	102.14	1,695.22	590.40	2,951.99
509e	GROUTED RIP RAP CLASS "B"	CM	544.12	81.72	1,548.34	543.54	2,717.72
509f	GROUTED RIP RAP CLASS "C"	CM	536.89	68.10	1,592.26	549.31	2,746.56
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	763.47	353.02	4,049.37	1,291.47	6,457.33
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	43.77	191.97	431.71	166.86	834.32
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	93.28	390.69	-	120.99	604.96
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	145.98	67.48	49.50	65.74	328.69
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	186.85	86.37	63.36	84.15	420.73
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	238.78	180.32	346.65	191.44	957.19
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	298.48	225.40	433.31	239.30	1,196.49
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	276.23	572.25	2,158.44	751.73	3,758.65
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	915.56	670.54	3,997.65	1,395.94	6,979.68
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	133.23	90.27	419.32	160.70	803.51
603	BRICK EDGING	M	8.43	-	33.60	10.51	52.54
604a	METAL GUARD RAIL	M	17.70	70.84	1,579.36	416.97	2,084.87
604b	METAL GUARD RAIL END PIECES	EACH	21.70	-	1,197.58	304.82	1,524.09
604d	STEEL POST OF METAL GUARD RAIL	EACH	84.00	976.73	3,776.31	1,209.26	6,046.30
605a	CONCRETE BEAM GUARD RAIL	M	67.60	30.82	586.38	171.20	856.00
605c	CONCRETE POST FOR GUARD RAIL	M	83.00	27.36	585.44	173.95	869.75
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	224.16	255.15	6,861.17	1,835.12	9,175.60
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	69.26	382.72	9,253.43	2,426.35	12,131.77
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	224.16	541.89	11,877.81	3,160.96	15,804.82
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	690.18	598.64	20,955.63	5,561.11	27,805.57
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	138.04	119.73	9,224.70	2,370.62	11,853.08
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	275.56	-	1,307.91	395.87	1,979.34
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	275.56	-	1,961.87	559.36	2,796.79
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.67	5.86	16.19	6.18	30.90
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.89	4.03	39.93	11.21	56.05
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.67	5.86	21.60	7.53	37.66

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.89	4.03	53.25	14.54	72.71
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	70.41	5.22	156.42	58.01	290.06
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	70.41	9.98	503.12	145.88	729.39
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.34	8.59	22.50	8.61	43.04
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.34	9.63	67.50	20.12	100.59
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.34	6.95	30.01	10.07	50.37
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.34	9.63	90.01	25.74	128.72
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	70.41	3.73	217.28	72.85	364.27
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	70.41	7.90	851.20	232.38	1,161.88
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	58.82	3.73	104.28	41.71	208.53
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	58.82	7.90	335.92	100.66	503.30
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	58.82	3.73	144.85	51.85	259.25
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	58.82	7.90	568.32	158.76	793.80
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.62	81.62	193.79	71.26	356.29
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.62	81.62	233.79	81.26	406.28
610b	RIGHT OF WAY MARKER	EACH	92.81	121.33	295.22	127.34	636.70
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	580.79	976.31	1,975.21	883.08	4,415.39
610d	TEN KILOMETRE POST	EACH	1,107.49	1,952.61	4,348.11	1,852.05	9,260.26
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	125.55	91.00	947.10	290.91	1,454.57

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

LARKANA
(38)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.66	10.10	-	2.69	13.45
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.92	173.32	1.17	45.35	226.76
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.28	456.54	2.63	119.61	598.06
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	77.13	1,826.16	10.51	478.45	2,392.25
103	STRIPPING	CM	2.52	93.22	-	23.94	119.68
104	COMPACTION OF NATURAL GROUND	SM	0.36	9.91	0.76	2.76	13.79
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.92	135.76	-	35.17	175.85
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	133.03	316.30	50.82	125.04	625.18
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	18.17	337.99	-	89.04	445.20
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.99	262.40	-	68.60	342.98
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.03	120.27	-	31.07	155.37
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	133.03	316.30	50.82	125.04	625.18
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.16	316.03	-	84.30	421.49
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.27	263.92	-	68.30	341.49
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.99	137.60	0.38	36.49	182.46
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	63.00	287.11	70.80	105.23	526.15
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	117.55	427.01	33.88	144.61	723.05
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	99.16	292.53	-	97.92	489.61
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	60.45	238.86	-	74.83	374.15
107d	GRANULAR BACK FILL	CM	32.90	137.14	470.81	160.21	801.06
107e	COMMON BACK FILL	CM	22.39	62.84	5.09	22.58	112.89
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.37	174.71	5.09	46.79	233.96
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.79	482.48	54.04	139.33	696.64
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.59	416.71	2.42	108.68	543.41
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.86	369.34	-	95.80	479.01
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.20	177.46	7.94	48.40	241.99
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.62	76.32	5.09	22.01	110.04
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.66	110.29	3.03	31.99	159.97
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.45	27.34	1.46	7.56	37.81

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.07	18.21	0.77	5.01	25.07
110	IMPROVED SUB-GRADE	CM	10.38	120.02	55.27	46.42	232.08
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.87	15.26	0.79	4.23	21.16
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.32	15.57	0.90	4.45	22.23
201	GRANULAR SUB-BASE	CM	8.37	255.06	618.31	220.44	1,102.18
202	AGGREGATE BASE	CM	10.08	326.54	825.41	290.51	1,452.54
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	67.69	1,510.17	6,093.05	1,917.73	9,588.63
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	70.38	1,510.17	6,487.12	2,016.92	10,084.58
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	75.71	1,577.28	6,083.66	1,934.16	9,670.81
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	75.71	1,571.31	6,631.13	2,069.54	10,347.68
204b	CEMENT STABILIZED BASE	CM	30.00	569.10	1,217.00	454.02	2,270.12
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	247.34	915.38	51,632.04	13,198.69	65,993.45
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	247.34	915.38	50,053.91	12,804.16	64,020.79
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	83.38	112.80	1,064.34	315.13	1,575.64
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	144.92	2,437.94	5,790.35	2,093.30	10,466.51
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	91.05	126.27	748.51	241.46	1,207.29
207a	DEEP PATCHING (0-15 cm)	SM	1.85	45.04	1.26	12.04	60.18
207b	DEEP PATCHING (16-30 cm)	SM	1.85	39.67	1.26	10.70	53.48
208	REINSTATEMENT OF ROAD SURFACE	SM	1.99	57.10	0.56	14.91	74.57
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.33	110.61	0.68	28.41	142.03
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.47	22.12	0.14	5.68	28.41
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	36.65	9.63	48.16
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.91	10.69	53.47
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.34	4.01	20.05
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.89	4.65	23.24
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	73.61	20.50	102.49
304b	DOUBLE SURFACE TREATMENT	SM	1.18	14.15	143.26	39.65	198.25
304c	TRIPLE SURFACE TREATMENT	SM	2.01	19.94	163.53	46.37	231.85
304d	SEAL COAT	SM	0.75	4.12	52.00	14.22	71.09

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	65.25	1,489.33	7,104.37	2,164.74	10,823.69
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	65.25	1,438.23	7,660.56	2,291.01	11,455.05
307a	DENSE GRADED HOT BIT-MAC	CM	160.58	379.77	5,893.15	1,608.38	8,041.88
307b	OPEN GRADED HOT BIT-MAC	CM	160.58	379.77	5,725.01	1,566.34	7,831.71
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	28.69	590.65	2,067.00	671.59	3,357.93
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	25.05	650.70	43,669.60	11,086.34	55,431.69
309a	COLD MILLING, 0 - 30 mm	SM	1.00	24.99	8.68	8.67	43.33
309b	COLD MILLING, 0 - 50 mm	SM	1.66	41.65	14.46	14.44	72.22
309c	COLD MILLING, 0 - 70 mm	SM	2.49	62.48	21.69	21.67	108.33
401a1i	CONCRETE CLASS "A1" (Underground)	CM	537.55	1,059.94	4,075.79	1,418.32	7,091.60
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	537.55	1,059.94	4,353.26	1,487.69	7,438.44
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	537.55	1,059.94	4,908.21	1,626.42	8,132.12
401a2i	CONCRETE CLASS "A2" (Underground)	CM	537.55	1,059.94	4,453.79	1,512.82	7,564.10
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	537.55	1,059.94	4,731.26	1,582.19	7,910.94
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	537.55	1,059.94	5,286.21	1,720.92	8,604.62
401a3i	CONCRETE CLASS "A3" (Underground)	CM	537.55	1,059.94	4,831.79	1,607.32	8,036.60
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	537.55	1,059.94	5,109.26	1,676.69	8,383.44
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	537.55	1,059.94	5,664.21	1,815.42	9,077.12
401b	CONCRETE CLASS "B"	CM	689.29	805.93	3,291.53	1,196.69	5,983.44
401ci	CONCRETE CLASS "C" (Underground)	CM	517.19	500.55	3,649.49	1,166.81	5,834.03
401cii	CONCRETE CLASS "C" (On ground)	CM	517.19	500.55	3,767.83	1,196.39	5,981.95
401ciii	CONCRETE CLASS "C" (Elevated)	CM	517.19	500.55	4,004.51	1,255.56	6,277.81
401d	CONCRETE CLASS "D1"	CM	820.25	1,265.57	5,403.15	1,872.24	9,361.21
401e	CONCRETE CLASS "Y"	CM	1,108.71	500.55	4,858.88	1,617.04	8,085.18
401f	LEAN CONCRETE	CM	418.95	507.52	2,562.85	872.33	4,361.65
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,699.69	947.15	5,089.78	1,934.15	9,670.77
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,699.69	947.15	5,845.78	2,123.15	10,615.77
401gii	PRECAST CONCRETE CLASS "B"	CM	1,699.69	947.15	4,828.95	1,868.95	9,344.73
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,699.69	947.15	6,223.78	2,217.65	11,088.27

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,699.69	947.15	6,601.78	2,312.15	11,560.77
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,699.69	947.15	6,979.78	2,406.65	12,033.27
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,594.75	781.47	59,888.00	15,566.06	77,830.28
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,594.75	781.47	67,238.00	17,403.56	87,017.78
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,302.89	5,393.81	55,671.17	15,591.97	77,959.85
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,591.48	15,659.05	133,776.00	38,006.63	190,033.17
405b	LAUNCHING OF GIRDER	TON	59.45	532.52	-	147.99	739.97
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	112.51	-	302.20	103.68	518.39
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	112.51	-	295.89	102.10	510.50
406c	STEEL EXPANSION JOINTS	KG	9.20	26.40	90.08	31.42	157.10
406d	WATER STOPS 6" SIZE	M	99.37	-	465.28	141.16	705.81
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	42.63	-	2,888.10	732.68	3,663.40
406g	STEEL OR METAL BEARING DEVICES	KG	19.60	69.68	116.17	51.36	256.82
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	319.83	1,654.04	720.23	673.53	3,367.63
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	479.74	2,481.06	1,080.35	1,010.29	5,051.44
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	479.74	2,481.06	819.96	945.19	4,725.96
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	799.57	4,135.11	1,000.57	1,483.81	7,419.07
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	685.35	4,884.94	1,185.76	1,689.01	8,445.06
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,199.36	6,909.78	1,294.97	2,351.03	11,755.13
407h	PILE LOAD TEST UP TO 120 TON	EACH	20,327.83	45,769.30	99,547.10	41,411.06	207,055.29
407i	PILE LOAD TEST UP TO 240 TON	EACH	37,020.31	45,769.30	199,094.20	70,470.95	352,354.77
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,712.79	50,188.38	298,641.30	100,635.62	503,178.09
407k	CONFIRMATORY BORING (NX SIZE)	M	176.03	1,582.02	6.37	441.10	2,205.52
410	BRICK WORK	CM	327.26	282.72	2,776.54	846.63	4,233.15
411a	STONE MASONRY RANDOM DRY	CM	281.53	107.96	491.89	220.35	1,101.73
411b	STONE MASONRY RANDOM WITH MORTAR	CM	304.72	166.68	1,533.89	501.32	2,506.61
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	365.00	107.96	548.33	255.32	1,276.60
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	429.91	166.68	1,597.45	548.51	2,742.55

District: Larkana **District Code: 38**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	69.95	11.74	44.01	31.43	157.13
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	573.65	264.08	1,502.64	585.10	2,925.48
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	207.05	437.48	643.88	322.11	1,610.53
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	200.42	577.19	834.76	403.09	2,015.45
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	204.52	935.96	1,005.68	536.54	2,682.69
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	211.22	1,146.39	1,556.47	728.52	3,642.60
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	243.42	1,078.41	2,199.54	880.34	4,401.71
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	303.83	1,331.30	3,615.70	1,312.71	6,563.54
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	393.20	1,481.41	4,681.65	1,639.06	8,195.32
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	460.89	1,798.85	5,966.08	2,056.46	10,282.28
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	547.14	2,098.66	9,215.59	2,965.35	14,826.74
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	207.05	507.33	662.74	344.28	1,721.41
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	200.42	577.19	781.77	389.84	1,949.21
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	198.59	935.96	956.53	522.77	2,613.84
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	211.22	1,146.39	1,591.56	737.29	3,686.46
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	243.42	1,078.41	3,025.04	1,086.72	5,433.60
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	303.83	1,331.30	4,441.70	1,519.21	7,596.04
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	393.20	1,481.41	6,203.83	2,019.61	10,098.04
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	460.89	1,798.85	8,412.29	2,668.01	13,340.04
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	547.14	2,098.66	11,831.33	3,619.28	18,096.42
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	83.73	118.93	440.80	160.86	804.32
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	779.15	612.95	3,641.53	1,258.41	6,292.04
507a	STEEL WIRE MESH FOR GABIONS	KG	5.07	-	104.07	27.29	136.43
507b	ROCK FILL IN GABIONS	CM	87.24	-	373.82	115.27	576.33
508a	BRICK PAVING (SINGLE COURSE)	SM	106.05	32.70	215.32	88.52	442.59
508b	BRICK PAVING (DOUBLE COURSE)	SM	189.52	32.70	426.97	162.30	811.48
509a	RIP RAP CLASS "A"	CM	463.88	-	397.09	215.24	1,076.21
509b	RIP RAP CLASS "B"	CM	445.29	-	393.91	209.80	1,049.00
509c	RIP RAP CLASS "C"	CM	448.36	-	397.09	211.36	1,056.80

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	565.05	102.14	1,799.85	616.76	3,083.81
509e	GROUTED RIP RAP CLASS "B"	CM	544.78	81.72	1,650.97	569.37	2,846.83
509f	GROUTED RIP RAP CLASS "C"	CM	537.44	68.10	1,696.08	575.40	2,877.02
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	779.38	353.02	4,201.37	1,333.44	6,667.22
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	44.26	191.97	470.97	176.80	884.00
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	93.30	390.69	-	121.00	605.00
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	146.99	67.48	64.53	69.75	348.74
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	188.15	86.37	82.59	89.28	446.39
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	240.08	180.32	362.11	195.63	978.13
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	300.10	225.40	452.63	244.53	1,222.67
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	284.87	572.25	2,278.16	783.82	3,919.10
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	934.32	670.54	4,131.92	1,434.19	7,170.97
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	135.84	90.27	441.45	166.89	834.44
603	BRICK EDGING	M	8.51	-	33.60	10.53	52.64
604a	METAL GUARD RAIL	M	17.71	70.84	1,579.36	416.98	2,084.88
604b	METAL GUARD RAIL END PIECES	EACH	21.70	-	1,197.58	304.82	1,524.10
604d	STEEL POST OF METAL GUARD RAIL	EACH	84.05	976.73	3,776.31	1,209.27	6,046.36
605a	CONCRETE BEAM GUARD RAIL	M	68.13	30.82	596.06	173.75	868.77
605c	CONCRETE POST FOR GUARD RAIL	M	83.65	27.36	597.26	177.07	885.34
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	225.28	255.15	6,876.18	1,839.15	9,195.76
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	72.13	382.72	9,280.27	2,433.78	12,168.90
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	225.28	541.89	11,922.21	3,172.34	15,861.71
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	691.86	598.64	21,019.81	5,577.58	27,887.88
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	138.37	119.73	9,234.64	2,373.19	11,865.93
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	275.69	-	1,307.04	395.68	1,978.42
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	275.69	-	1,960.56	559.06	2,795.32
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.75	5.86	16.18	6.20	30.99
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.92	4.03	39.87	11.20	56.02
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.75	5.86	21.59	7.55	37.75

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.92	4.03	53.18	14.53	72.66
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	71.21	5.22	156.37	58.20	291.00
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	71.21	9.98	502.46	145.91	729.56
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.44	8.59	22.50	8.63	43.15
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.44	9.63	67.50	20.14	100.72
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.44	6.95	30.00	10.10	50.48
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.44	9.63	90.01	25.77	128.84
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	71.21	3.73	217.23	73.04	365.21
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	71.21	7.90	851.20	232.58	1,162.88
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	59.62	3.73	104.25	41.90	209.49
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	59.62	7.90	335.48	100.75	503.74
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	59.62	3.73	144.82	52.04	260.20
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	59.62	7.90	568.32	158.96	794.80
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	10.17	81.62	193.82	71.40	357.01
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	10.17	81.62	233.82	81.40	407.01
610b	RIGHT OF WAY MARKER	EACH	93.69	121.33	305.48	130.12	650.62
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	582.44	976.31	2,058.59	904.33	4,521.67
610d	TEN KILOMETRE POST	EACH	1,110.78	1,952.61	4,515.14	1,894.63	9,473.16
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	127.98	91.00	956.83	293.95	1,469.76

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

MIR PUR KHAS
(45-A)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.73	10.10	-	2.71	13.53
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.51	173.32	1.17	45.50	227.49
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	21.15	456.54	2.63	120.08	600.39
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	84.58	1,826.16	10.51	480.31	2,401.57
103	STRIPPING	CM	2.65	93.22	-	23.97	119.83
104	COMPACTION OF NATURAL GROUND	SM	0.38	9.91	0.76	2.76	13.81
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.10	135.76	-	35.21	176.07
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	139.53	316.30	50.82	126.66	633.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	19.04	337.99	-	89.26	446.30
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	12.52	262.40	-	68.73	343.64
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.17	120.27	-	31.11	155.55
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	139.53	316.30	50.82	126.66	633.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	22.24	316.03	-	84.57	422.84
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.67	263.92	-	68.40	341.99
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.16	137.60	0.38	36.54	182.68
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	65.57	287.11	70.80	105.87	529.36
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	123.54	427.01	33.88	146.11	730.55
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	104.37	292.53	-	99.23	496.14
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	63.54	238.86	-	75.60	378.00
107d	GRANULAR BACK FILL	CM	35.77	137.14	445.92	154.71	773.55
107e	COMMON BACK FILL	CM	24.95	62.84	5.09	23.22	116.10
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.66	174.71	5.09	46.86	234.32
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	21.88	482.48	54.04	139.60	698.00
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	16.41	416.71	2.42	108.88	544.42
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	14.59	369.34	-	95.98	479.91
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.60	177.46	7.94	48.50	242.50
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.85	76.32	5.09	22.06	110.32
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	15.45	110.29	3.03	32.19	160.96
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.52	27.34	1.46	7.58	37.90

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.11	18.21	0.77	5.02	25.11
110	IMPROVED SUB-GRADE	CM	10.90	120.02	55.27	46.55	232.74
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.91	15.26	0.79	4.24	21.20
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.36	15.57	0.90	4.46	22.28
201	GRANULAR SUB-BASE	CM	8.78	255.06	612.21	219.01	1,095.07
202	AGGREGATE BASE	CM	10.63	326.54	799.71	284.22	1,421.09
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	74.39	1,510.17	5,819.01	1,850.89	9,254.46
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	77.29	1,510.17	6,242.73	1,957.55	9,787.74
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	82.76	1,577.28	5,809.61	1,867.41	9,337.06
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	82.76	1,571.31	6,385.86	2,009.98	10,049.91
204b	CEMENT STABILIZED BASE	CM	31.88	569.10	969.56	392.64	1,963.18
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	259.09	915.38	50,780.61	12,988.77	64,943.84
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	259.09	915.38	49,202.48	12,594.24	62,971.18
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	93.11	112.80	984.34	297.56	1,487.81
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	156.36	2,437.94	5,601.93	2,049.06	10,245.29
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	102.36	126.27	748.08	244.18	1,220.90
207a	DEEP PATCHING (0-15 cm)	SM	1.90	45.04	1.26	12.05	60.24
207b	DEEP PATCHING (16-30 cm)	SM	1.90	39.67	1.26	10.71	53.54
208	REINSTATEMENT OF ROAD SURFACE	SM	2.09	57.10	0.56	14.94	74.69
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.33	110.61	0.68	28.41	142.03
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.47	22.12	0.14	5.68	28.41
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.32	1.57	36.04	9.48	47.42
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	40.23	10.53	52.65
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.08	3.95	19.74
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.60	4.58	22.88
304a	SINGLE SURFACE TREATMENT	SM	0.86	7.57	71.70	20.03	100.16
304b	DOUBLE SURFACE TREATMENT	SM	1.25	14.15	139.37	38.69	193.46
304c	TRIPLE SURFACE TREATMENT	SM	2.10	19.94	158.96	45.25	226.25
304d	SEAL COAT	SM	0.80	4.12	50.41	13.83	69.15

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	71.16	1,489.33	6,821.86	2,095.59	10,477.94
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	71.16	1,438.23	7,349.42	2,214.70	11,073.51
307a	DENSE GRADED HOT BIT-MAC	CM	174.93	379.77	5,601.92	1,539.16	7,695.79
307b	OPEN GRADED HOT BIT-MAC	CM	174.93	379.77	5,488.00	1,510.68	7,553.38
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	30.82	590.65	2,031.51	663.25	3,316.23
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	26.95	650.70	42,792.88	10,867.63	54,338.16
309a	COLD MILLING, 0 - 30 mm	SM	1.06	24.99	8.68	8.68	43.41
309b	COLD MILLING, 0 - 50 mm	SM	1.76	41.65	14.46	14.47	72.35
309c	COLD MILLING, 0 - 70 mm	SM	2.64	62.48	21.69	21.70	108.52
401a1i	CONCRETE CLASS "A1" (Underground)	CM	541.40	1,059.94	3,875.43	1,369.19	6,845.96
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	541.40	1,059.94	4,152.90	1,438.56	7,192.80
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	541.40	1,059.94	4,707.85	1,577.30	7,886.48
401a2i	CONCRETE CLASS "A2" (Underground)	CM	541.40	1,059.94	4,253.43	1,463.69	7,318.46
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	541.40	1,059.94	4,530.90	1,533.06	7,665.30
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	541.40	1,059.94	5,085.85	1,671.80	8,358.98
401a3i	CONCRETE CLASS "A3" (Underground)	CM	541.40	1,059.94	4,631.43	1,558.19	7,790.96
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	541.40	1,059.94	4,908.90	1,627.56	8,137.80
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	541.40	1,059.94	5,463.85	1,766.30	8,831.48
401b	CONCRETE CLASS "B"	CM	707.03	805.93	3,178.13	1,172.77	5,863.87
401ci	CONCRETE CLASS "C" (Underground)	CM	521.94	500.55	3,477.80	1,125.07	5,625.36
401cii	CONCRETE CLASS "C" (On ground)	CM	521.94	500.55	3,596.14	1,154.66	5,773.28
401ciii	CONCRETE CLASS "C" (Elevated)	CM	521.94	500.55	3,832.83	1,213.83	6,069.14
401d	CONCRETE CLASS "D1"	CM	825.70	1,265.57	5,231.48	1,830.69	9,153.43
401e	CONCRETE CLASS "Y"	CM	1,123.48	500.55	4,645.36	1,567.34	7,836.72
401f	LEAN CONCRETE	CM	440.72	507.52	2,448.95	849.30	4,246.48
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,731.12	947.15	4,864.19	1,885.62	9,428.08
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,731.12	947.15	5,620.19	2,074.62	10,373.08
401gii	PRECAST CONCRETE CLASS "B"	CM	1,731.12	947.15	4,709.62	1,846.97	9,234.87
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,731.12	947.15	5,998.19	2,169.12	10,845.58

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,731.12	947.15	6,376.19	2,263.62	11,318.08
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,731.12	947.15	6,754.19	2,358.12	11,790.58
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,621.96	781.47	59,358.00	15,440.36	77,201.78
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,621.96	781.47	66,708.00	17,277.86	86,389.28
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,336.06	5,393.81	55,129.41	15,464.82	77,324.11
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,785.35	15,659.05	133,730.70	38,043.78	190,218.88
405b	LAUNCHING OF GIRDER	TON	64.10	532.52	-	149.16	745.78
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	117.04	-	294.41	102.86	514.31
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	117.04	-	288.69	101.43	507.16
406c	STEEL EXPANSION JOINTS	KG	9.58	26.40	89.60	31.39	156.97
406d	WATER STOPS 6" SIZE	M	100.84	-	464.39	141.31	706.54
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	40.53	-	2,868.20	727.18	3,635.91
406g	STEEL OR METAL BEARING DEVICES	KG	21.19	69.68	115.72	51.65	258.25
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	342.87	1,654.04	716.63	678.38	3,391.92
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	514.30	2,481.06	1,074.95	1,017.58	5,087.88
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	514.30	2,481.06	814.39	952.44	4,762.18
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	857.16	4,135.11	991.28	1,495.89	7,479.44
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	734.71	4,884.94	1,171.08	1,697.68	8,488.42
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,285.75	6,909.78	1,281.03	2,369.14	11,845.70
407h	PILE LOAD TEST UP TO 120 TON	EACH	22,896.33	45,769.30	99,546.22	42,052.96	210,264.82
407i	PILE LOAD TEST UP TO 240 TON	EACH	42,027.77	45,769.30	199,092.44	71,722.38	358,611.89
407j	PILE LOAD TEST UP TO 360 TON	EACH	61,159.21	50,188.38	298,638.66	102,496.56	512,482.82
407k	CONFIRMATORY BORING (NX SIZE)	M	194.07	1,582.02	6.37	445.62	2,228.08
410	BRICK WORK	CM	312.93	282.72	2,745.34	835.25	4,176.25
411a	STONE MASONRY RANDOM DRY	CM	275.27	107.96	602.12	246.34	1,231.69
411b	STONE MASONRY RANDOM WITH MORTAR	CM	294.59	166.68	1,605.13	516.60	2,583.00
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	356.43	107.96	668.71	283.27	1,416.37
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	416.32	166.68	1,688.59	567.90	2,839.49

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	65.51	11.74	43.36	30.15	150.76
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	559.31	264.08	1,593.78	604.29	3,021.47
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	224.10	437.48	642.67	326.06	1,630.31
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	217.29	577.19	833.30	406.94	2,034.71
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	217.84	935.96	1,003.97	539.44	2,697.21
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	227.02	1,146.39	1,554.47	731.97	3,659.86
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	262.87	1,078.41	2,197.54	884.71	4,423.53
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	326.77	1,331.30	3,612.82	1,317.72	6,588.61
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	422.88	1,481.41	4,678.78	1,645.77	8,228.83
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	499.70	1,798.85	5,962.60	2,065.29	10,326.43
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	588.96	2,098.66	9,211.52	2,974.79	14,873.93
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	224.10	507.33	660.30	347.93	1,739.67
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	217.29	577.19	780.31	393.69	1,968.47
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	211.77	935.96	954.82	525.64	2,628.18
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	227.02	1,146.39	1,590.01	740.86	3,704.28
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	262.87	1,078.41	3,022.83	1,091.03	5,455.14
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	326.77	1,331.30	4,438.82	1,524.22	7,621.11
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	422.88	1,481.41	6,200.96	2,026.31	10,131.56
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	499.70	1,798.85	8,408.81	2,676.84	13,384.19
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	588.96	2,098.66	11,827.27	3,628.72	18,143.62
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	91.46	118.93	414.47	156.22	781.08
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	797.79	612.95	3,528.13	1,234.72	6,173.59
507a	STEEL WIRE MESH FOR GABIONS	KG	5.39	-	103.98	27.34	136.71
507b	ROCK FILL IN GABIONS	CM	96.55	-	392.68	122.31	611.53
508a	BRICK PAVING (SINGLE COURSE)	SM	105.38	32.70	215.32	88.35	441.75
508b	BRICK PAVING (DOUBLE COURSE)	SM	186.54	32.70	426.97	161.55	807.75
509a	RIP RAP CLASS "A"	CM	453.40	-	507.31	240.18	1,200.89
509b	RIP RAP CLASS "B"	CM	436.14	-	503.25	234.85	1,174.25
509c	RIP RAP CLASS "C"	CM	437.52	-	507.31	236.21	1,181.04

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	554.27	102.14	1,885.71	635.53	3,177.65
509e	GROUTED RIP RAP CLASS "B"	CM	532.29	81.72	1,738.48	588.12	2,940.61
509f	GROUTED RIP RAP CLASS "C"	CM	524.73	68.10	1,783.56	594.10	2,970.48
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	785.03	353.02	4,094.09	1,308.04	6,540.18
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	48.68	191.97	446.22	171.72	858.59
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	102.56	390.69	-	123.31	616.56
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	145.87	67.48	82.44	73.95	369.73
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	186.71	86.37	105.52	94.65	473.25
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	234.63	180.32	370.11	196.26	981.32
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	293.28	225.40	462.63	245.33	1,226.65
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	287.08	572.25	2,173.57	758.23	3,791.13
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	950.03	670.54	4,003.59	1,406.04	7,030.19
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	138.17	90.27	422.82	162.81	814.07
603	BRICK EDGING	M	8.67	-	33.60	10.57	52.84
604a	METAL GUARD RAIL	M	19.00	70.84	1,579.36	417.30	2,086.50
604b	METAL GUARD RAIL END PIECES	EACH	23.70	-	1,197.58	305.32	1,526.60
604d	STEEL POST OF METAL GUARD RAIL	EACH	89.42	976.73	3,776.31	1,210.61	6,053.07
605a	CONCRETE BEAM GUARD RAIL	M	72.38	30.82	585.20	172.10	860.50
605c	CONCRETE POST FOR GUARD RAIL	M	88.87	27.36	584.27	175.13	875.63
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	236.34	255.15	6,859.32	1,837.70	9,188.51
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	69.97	382.72	9,248.05	2,425.19	12,125.93
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	236.34	541.89	11,868.29	3,161.63	15,808.14
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	754.53	598.64	20,931.57	5,571.19	27,855.93
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	150.91	119.73	9,206.82	2,369.36	11,846.81
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	286.02	-	1,304.20	397.56	1,987.78
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	286.02	-	1,956.31	560.58	2,802.91
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.87	5.86	16.17	6.22	31.12
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.96	4.03	39.70	11.17	55.86
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.87	5.86	21.57	7.58	37.88

District: Mir Pur Khas **District Code: 45-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.96	4.03	52.96	14.49	72.43
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	72.51	5.22	156.21	58.48	292.42
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	72.51	9.98	500.34	145.71	728.55
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.59	8.59	22.48	8.67	43.33
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.59	9.63	67.50	20.18	100.91
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.59	6.95	29.98	10.13	50.65
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.59	9.63	90.01	25.81	129.04
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	72.51	3.73	217.07	73.33	366.63
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	72.51	7.90	851.20	232.90	1,164.51
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	60.92	3.73	104.14	42.20	210.98
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	60.92	7.90	334.06	100.72	503.60
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	60.92	3.73	144.71	52.34	261.70
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	60.92	7.90	568.32	159.29	796.43
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.57	81.62	193.77	71.24	356.20
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.57	81.62	233.77	81.24	406.20
610b	RIGHT OF WAY MARKER	EACH	101.79	121.33	295.83	129.74	648.68
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	608.45	976.31	1,977.10	890.46	4,452.32
610d	TEN KILOMETRE POST	EACH	1,178.27	1,952.61	4,352.69	1,870.89	9,354.47
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	131.94	91.00	948.79	292.93	1,464.66

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

NAWABSHAH
(49)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.66	10.10	-	2.69	13.46
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.07	173.32	1.17	45.39	226.95
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.58	456.54	2.63	119.69	598.44
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	78.32	1,826.16	10.51	478.75	2,393.74
103	STRIPPING	CM	2.60	93.22	-	23.95	119.77
104	COMPACTION OF NATURAL GROUND	SM	0.38	9.91	0.76	2.76	13.81
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.21	135.76	-	35.24	176.21
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	133.01	316.30	50.82	125.03	625.16
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.64	337.99	-	88.91	444.54
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.64	262.40	-	68.51	342.55
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.26	120.27	-	31.13	155.67
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	133.01	316.30	50.82	125.03	625.16
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.17	316.03	-	84.30	421.49
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.00	263.92	-	68.23	341.15
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.26	137.60	0.38	36.56	182.80
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	63.22	287.11	70.80	105.28	526.42
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	117.58	427.01	33.88	144.62	723.10
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	98.60	292.53	-	97.78	488.92
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	60.47	238.86	-	74.83	374.17
107d	GRANULAR BACK FILL	CM	33.50	137.14	500.08	167.68	838.39
107e	COMMON BACK FILL	CM	22.76	62.84	5.09	22.67	113.36
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.32	174.71	5.09	46.78	233.90
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.68	482.48	54.04	139.30	696.50
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.51	416.71	2.42	108.66	543.30
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.79	369.34	-	95.78	478.91
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.14	177.46	7.94	48.38	241.92
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.58	76.32	5.09	22.00	109.98
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.66	110.29	3.03	31.99	159.97
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.46	27.34	1.46	7.56	37.82

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.09	18.21	0.77	5.02	25.08
110	IMPROVED SUB-GRADE	CM	10.37	120.02	43.23	43.40	217.02
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.88	15.26	0.79	4.23	21.17
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.32	15.57	0.90	4.45	22.23
201	GRANULAR SUB-BASE	CM	8.29	255.06	637.79	225.29	1,126.43
202	AGGREGATE BASE	CM	10.01	326.54	807.05	285.90	1,429.50
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	67.07	1,510.17	5,988.32	1,891.39	9,456.94
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	69.74	1,510.17	6,375.77	1,988.92	9,944.60
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	74.91	1,577.28	5,978.95	1,907.79	9,538.93
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	74.91	1,571.31	6,518.79	2,041.25	10,206.26
204b	CEMENT STABILIZED BASE	CM	29.77	569.10	1,169.56	442.11	2,210.55
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	250.73	915.38	50,956.35	13,030.61	65,153.06
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	250.73	915.38	49,378.22	12,636.08	63,180.40
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	83.13	112.80	1,016.31	303.06	1,515.31
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	143.55	2,437.94	5,689.69	2,067.80	10,338.98
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	90.37	126.27	765.61	245.56	1,227.81
207a	DEEP PATCHING (0-15 cm)	SM	1.85	45.04	1.26	12.03	60.17
207b	DEEP PATCHING (16-30 cm)	SM	1.85	39.67	1.26	10.69	53.47
208	REINSTATEMENT OF ROAD SURFACE	SM	1.99	57.10	0.56	14.91	74.56
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.43	110.61	0.68	28.43	142.15
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.49	22.12	0.14	5.69	28.43
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	36.17	9.51	47.56
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.37	10.56	52.81
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.14	3.96	19.80
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.66	4.59	22.95
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	72.37	20.19	100.94
304b	DOUBLE SURFACE TREATMENT	SM	1.18	14.15	140.60	38.98	194.92
304c	TRIPLE SURFACE TREATMENT	SM	2.01	19.94	160.47	45.60	228.02
304d	SEAL COAT	SM	0.75	4.12	51.24	14.03	70.15

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	64.63	1,489.33	6,982.73	2,134.17	10,670.87
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	64.63	1,438.23	7,529.15	2,258.00	11,290.01
307a	DENSE GRADED HOT BIT-MAC	CM	157.65	379.77	5,780.64	1,579.51	7,897.57
307b	OPEN GRADED HOT BIT-MAC	CM	157.65	379.77	5,612.27	1,537.42	7,687.11
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	28.50	590.65	2,041.79	665.23	3,326.17
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	26.26	650.70	42,973.84	10,912.70	54,563.50
309a	COLD MILLING, 0 - 30 mm	SM	1.01	24.99	8.68	8.67	43.34
309b	COLD MILLING, 0 - 50 mm	SM	1.68	41.65	14.46	14.45	72.24
309c	COLD MILLING, 0 - 70 mm	SM	2.52	62.48	21.69	21.67	108.36
401a1i	CONCRETE CLASS "A1" (Underground)	CM	525.04	1,059.94	4,066.75	1,412.93	7,064.66
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	525.04	1,059.94	4,344.23	1,482.30	7,411.50
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	525.04	1,059.94	4,899.17	1,621.04	8,105.18
401a2i	CONCRETE CLASS "A2" (Underground)	CM	525.04	1,059.94	4,444.75	1,507.43	7,537.16
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	525.04	1,059.94	4,722.23	1,576.80	7,884.00
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	525.04	1,059.94	5,277.17	1,715.54	8,577.68
401a3i	CONCRETE CLASS "A3" (Underground)	CM	525.04	1,059.94	4,822.75	1,601.93	8,009.66
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	525.04	1,059.94	5,100.23	1,671.30	8,356.50
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	525.04	1,059.94	5,655.17	1,810.04	9,050.18
401b	CONCRETE CLASS "B"	CM	676.16	805.93	3,277.24	1,189.83	5,949.16
401ci	CONCRETE CLASS "C" (Underground)	CM	502.17	500.55	3,630.01	1,158.18	5,790.91
401cii	CONCRETE CLASS "C" (On ground)	CM	502.17	500.55	3,748.35	1,187.77	5,938.84
401ciii	CONCRETE CLASS "C" (Elevated)	CM	502.17	500.55	3,985.03	1,246.94	6,234.69
401d	CONCRETE CLASS "D1"	CM	806.11	1,265.57	5,393.13	1,866.20	9,331.01
401e	CONCRETE CLASS "Y"	CM	1,088.69	500.55	4,853.31	1,610.64	8,053.19
401f	LEAN CONCRETE	CM	412.03	507.52	2,548.11	866.91	4,334.57
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,640.30	947.15	5,082.02	1,917.37	9,586.83
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,640.30	947.15	5,838.02	2,106.37	10,531.83
401gii	PRECAST CONCRETE CLASS "B"	CM	1,640.30	947.15	4,811.29	1,849.69	9,248.43
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,640.30	947.15	6,216.02	2,200.87	11,004.33

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,640.30	947.15	6,594.02	2,295.37	11,476.83
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,640.30	947.15	6,972.02	2,389.87	11,949.33
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,605.45	781.47	59,888.00	15,568.73	77,843.65
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,605.45	781.47	67,238.00	17,406.23	87,031.15
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,297.36	5,393.81	55,593.84	15,571.25	77,856.27
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,537.19	15,659.05	133,758.95	37,988.80	189,943.99
405b	LAUNCHING OF GIRDER	TON	58.30	532.52	-	147.71	738.53
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	110.97	-	296.62	101.90	509.50
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	110.97	-	290.70	100.42	502.09
406c	STEEL EXPANSION JOINTS	KG	9.16	26.40	90.22	31.44	157.22
406d	WATER STOPS 6" SIZE	M	100.20	-	464.64	141.21	706.05
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	38.07	-	2,873.37	727.86	3,639.30
406g	STEEL OR METAL BEARING DEVICES	KG	19.35	69.68	116.26	51.32	256.62
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	319.00	1,654.04	711.55	671.15	3,355.74
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	478.51	2,481.06	1,067.32	1,006.72	5,033.61
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	478.51	2,481.06	806.81	941.60	4,707.98
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	797.51	4,135.11	978.66	1,477.82	7,389.09
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	683.58	4,884.94	1,149.08	1,679.40	8,397.01
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,196.27	6,909.78	1,262.10	2,342.04	11,710.18
407h	PILE LOAD TEST UP TO 120 TON	EACH	20,179.37	45,769.30	99,547.10	41,373.94	206,869.72
407i	PILE LOAD TEST UP TO 240 TON	EACH	36,722.81	45,769.30	199,094.20	70,396.58	351,982.90
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,266.25	50,188.38	298,641.30	100,523.98	502,619.92
407k	CONFIRMATORY BORING (NX SIZE)	M	172.72	1,582.02	6.37	440.28	2,201.39
410	BRICK WORK	CM	295.59	282.72	2,792.13	842.61	4,213.05
411a	STONE MASONRY RANDOM DRY	CM	261.58	107.96	655.91	256.36	1,281.81
411b	STONE MASONRY RANDOM WITH MORTAR	CM	280.72	166.68	1,717.40	541.20	2,706.00
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	336.64	107.96	725.47	292.52	1,462.59
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	393.31	166.68	1,789.22	587.30	2,936.51

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	61.80	11.74	44.34	29.47	147.35
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	524.28	264.08	1,694.41	620.69	3,103.47
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	204.38	437.48	644.49	321.59	1,607.95
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	197.16	577.19	835.49	402.46	2,012.29
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	200.31	935.96	1,006.53	535.70	2,678.50
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	207.17	1,146.39	1,557.46	727.76	3,638.78
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	239.08	1,078.41	2,200.53	879.51	4,397.54
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	296.90	1,331.30	3,617.14	1,311.34	6,556.68
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	384.23	1,481.41	4,683.08	1,637.18	8,185.90
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	452.89	1,798.85	5,967.82	2,054.89	10,274.45
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	534.43	2,098.66	9,217.62	2,962.68	14,813.39
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	204.38	507.33	663.96	343.92	1,719.59
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	197.16	577.19	782.50	389.21	1,946.05
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	194.38	935.96	957.38	521.93	2,609.65
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	207.17	1,146.39	1,592.34	736.47	3,682.37
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	239.08	1,078.41	3,026.15	1,085.91	5,429.56
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	296.90	1,331.30	4,443.14	1,517.84	7,589.18
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	384.23	1,481.41	6,205.26	2,017.72	10,088.62
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	452.89	1,798.85	8,414.03	2,666.44	13,332.21
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	534.43	2,098.66	11,833.36	3,616.61	18,083.07
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	85.41	118.93	453.96	164.58	822.88
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	770.82	612.95	3,627.24	1,252.75	6,263.75
507a	STEEL WIRE MESH FOR GABIONS	KG	5.13	-	104.56	27.42	137.12
507b	ROCK FILL IN GABIONS	CM	88.04	-	433.76	130.45	652.24
508a	BRICK PAVING (SINGLE COURSE)	SM	97.88	32.70	215.32	86.47	432.37
508b	BRICK PAVING (DOUBLE COURSE)	SM	172.93	32.70	426.97	158.15	790.75
509a	RIP RAP CLASS "A"	CM	423.80	-	561.10	246.23	1,231.13
509b	RIP RAP CLASS "B"	CM	406.44	-	556.61	240.76	1,203.81
509c	RIP RAP CLASS "C"	CM	407.63	-	561.10	242.18	1,210.91

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	516.41	102.14	1,976.05	648.65	3,243.26
509e	GROUTED RIP RAP CLASS "B"	CM	495.85	81.72	1,824.59	600.54	3,002.68
509f	GROUTED RIP RAP CLASS "C"	CM	488.26	68.10	1,871.46	606.96	3,034.78
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	736.62	353.02	4,187.75	1,319.35	6,596.74
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	44.12	191.97	500.07	184.04	920.21
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	95.05	390.69	-	121.44	607.18
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	137.44	67.48	91.18	74.02	370.12
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	175.93	86.37	116.71	94.75	473.75
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	221.27	180.32	387.04	197.16	985.79
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	276.58	225.40	483.80	246.45	1,232.24
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	278.31	572.25	2,273.26	780.95	3,904.77
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	901.60	670.54	4,127.88	1,425.01	7,125.03
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	130.90	90.27	440.49	165.41	827.07
603	BRICK EDGING	M	8.16	-	33.60	10.44	52.20
604a	METAL GUARD RAIL	M	17.79	70.84	1,579.36	417.00	2,084.98
604b	METAL GUARD RAIL END PIECES	EACH	22.15	-	1,197.58	304.93	1,524.66
604d	STEEL POST OF METAL GUARD RAIL	EACH	85.82	976.73	3,776.31	1,209.72	6,048.58
605a	CONCRETE BEAM GUARD RAIL	M	66.52	30.82	595.73	173.27	866.34
605c	CONCRETE POST FOR GUARD RAIL	M	81.67	27.36	596.88	176.48	882.39
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	216.02	255.15	6,866.32	1,834.37	9,171.86
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	67.32	382.72	9,269.96	2,430.00	12,150.00
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	216.02	541.89	11,906.22	3,166.03	15,830.16
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	674.81	598.64	20,990.23	5,565.92	27,829.61
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	134.96	119.73	9,222.01	2,369.17	11,845.87
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	286.13	-	1,305.03	397.79	1,988.95
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	286.13	-	1,957.54	560.92	2,804.59
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.77	5.86	16.17	6.20	31.00
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.92	4.03	39.75	11.18	55.88
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.77	5.86	21.58	7.55	37.76

District: Nawab Shah **District Code: 49**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.92	4.03	53.02	14.49	72.46
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	71.10	5.22	156.25	58.14	290.71
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	71.10	9.98	500.94	145.50	727.52
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.46	8.59	22.49	8.63	43.17
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.46	9.63	67.50	20.15	100.74
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.46	6.95	29.98	10.10	50.49
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.46	9.63	90.01	25.77	128.87
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	71.10	3.73	217.11	72.98	364.92
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	71.10	7.90	851.20	232.55	1,162.75
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	59.61	3.73	104.17	41.88	209.38
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	59.61	7.90	334.46	100.49	502.46
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	59.61	3.73	144.74	52.02	260.10
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	59.61	7.90	568.32	158.96	794.79
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.51	81.62	193.84	71.24	356.21
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.51	81.62	233.84	81.24	406.21
610b	RIGHT OF WAY MARKER	EACH	92.47	121.33	305.16	129.74	648.69
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	566.64	976.31	2,056.43	899.85	4,499.23
610d	TEN KILOMETRE POST	EACH	1,094.99	1,952.61	4,509.56	1,889.29	9,446.46
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	124.92	91.00	956.26	293.05	1,465.23

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

NAUSHERO FEROZ
(49-B)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Naushero Feroz **District Code: 49-B**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.66	10.10	-	2.69	13.46
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.05	173.32	1.17	45.38	226.92
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.54	456.54	2.63	119.68	598.38
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	78.16	1,826.16	10.51	478.71	2,393.54
103	STRIPPING	CM	2.55	93.22	-	23.94	119.71
104	COMPACTION OF NATURAL GROUND	SM	0.37	9.91	0.76	2.76	13.80
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	5.24	135.76	-	35.25	176.25
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	131.84	316.30	50.82	124.74	623.70
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.17	337.99	-	88.79	443.96
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.32	262.40	-	68.43	342.14
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.29	120.27	-	31.14	155.70
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	131.84	316.30	50.82	124.74	623.70
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.03	316.03	-	84.26	421.32
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.73	263.92	-	68.16	340.82
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.09	137.60	0.38	36.52	182.59
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	60.49	287.11	70.80	104.60	523.01
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	116.81	427.01	33.88	144.43	722.13
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	97.79	292.53	-	97.58	487.90
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	60.07	238.86	-	74.73	373.67
107d	GRANULAR BACK FILL	CM	33.69	137.14	399.72	142.64	713.19
107e	COMMON BACK FILL	CM	22.86	62.84	5.09	22.70	113.49
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.13	174.71	5.09	46.73	233.67
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.27	482.48	54.04	139.20	695.99
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.20	416.71	2.42	108.58	542.92
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.52	369.34	-	95.71	478.57
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.95	177.46	7.94	48.34	241.68
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.39	76.32	5.09	21.95	109.75
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.33	110.29	3.03	31.91	159.56
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.44	27.34	1.46	7.56	37.79

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.06	18.21	0.77	5.01	25.05
110	IMPROVED SUB-GRADE	CM	10.13	120.02	55.27	46.35	231.77
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.86	15.26	0.79	4.23	21.15
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.27	15.57	0.90	4.43	22.17
201	GRANULAR SUB-BASE	CM	8.11	255.06	594.89	214.52	1,072.58
202	AGGREGATE BASE	CM	9.88	326.54	799.71	284.03	1,420.16
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	66.44	1,510.17	5,949.69	1,881.57	9,407.87
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	69.11	1,510.17	6,344.85	1,981.03	9,905.16
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	74.06	1,577.28	5,940.22	1,897.89	9,489.47
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	74.06	1,571.31	6,488.26	2,033.41	10,167.04
204b	CEMENT STABILIZED BASE	CM	29.43	569.10	1,111.20	427.43	2,137.17
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	249.04	915.38	51,104.82	13,067.31	65,336.54
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	249.04	915.38	49,526.69	12,672.78	63,363.88
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	82.61	112.80	984.31	294.93	1,474.65
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	141.32	2,437.94	5,656.92	2,059.05	10,295.23
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	90.07	126.27	787.73	251.02	1,255.10
207a	DEEP PATCHING (0-15 cm)	SM	1.79	45.04	1.26	12.02	60.10
207b	DEEP PATCHING (16-30 cm)	SM	1.79	39.67	1.26	10.68	53.40
208	REINSTATEMENT OF ROAD SURFACE	SM	1.96	57.10	0.56	14.90	74.52
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.36	110.61	0.68	28.41	142.07
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.47	22.12	0.14	5.68	28.41
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	36.27	9.54	47.69
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.30	1.57	40.49	10.59	52.95
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.18	3.97	19.85
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.71	4.60	23.02
304a	SINGLE SURFACE TREATMENT	SM	0.81	7.57	72.39	20.19	100.97
304b	DOUBLE SURFACE TREATMENT	SM	1.18	14.15	140.51	38.96	194.80
304c	TRIPLE SURFACE TREATMENT	SM	1.99	19.94	160.35	45.57	227.85
304d	SEAL COAT	SM	0.76	4.12	51.24	14.03	70.15

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	63.91	1,489.33	6,949.39	2,125.66	10,628.28
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	63.91	1,438.23	7,494.03	2,249.04	11,245.21
307a	DENSE GRADED HOT BIT-MAC	CM	154.92	379.77	5,747.44	1,570.53	7,852.67
307b	OPEN GRADED HOT BIT-MAC	CM	154.92	379.77	5,584.84	1,529.88	7,649.41
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.55	590.65	2,039.22	664.35	3,321.77
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	26.52	650.70	43,126.72	10,950.99	54,754.93
309a	COLD MILLING, 0 - 30 mm	SM	1.00	24.99	8.68	8.67	43.33
309b	COLD MILLING, 0 - 50 mm	SM	1.66	41.65	14.46	14.44	72.22
309c	COLD MILLING, 0 - 70 mm	SM	2.49	62.48	21.69	21.67	108.33
401a1i	CONCRETE CLASS "A1" (Underground)	CM	492.97	1,059.94	4,039.53	1,398.11	6,990.54
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	492.97	1,059.94	4,317.00	1,467.48	7,337.38
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	492.97	1,059.94	4,871.95	1,606.21	8,031.06
401a2i	CONCRETE CLASS "A2" (Underground)	CM	492.97	1,059.94	4,417.53	1,492.61	7,463.04
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	492.97	1,059.94	4,695.00	1,561.98	7,809.88
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	492.97	1,059.94	5,249.95	1,700.71	8,503.56
401a3i	CONCRETE CLASS "A3" (Underground)	CM	492.97	1,059.94	4,795.53	1,587.11	7,935.54
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	492.97	1,059.94	5,073.00	1,656.48	8,282.38
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	492.97	1,059.94	5,627.95	1,795.21	8,976.06
401b	CONCRETE CLASS "B"	CM	655.85	805.93	3,262.04	1,180.96	5,904.78
401ci	CONCRETE CLASS "C" (Underground)	CM	477.34	500.55	3,602.52	1,145.10	5,725.50
401cii	CONCRETE CLASS "C" (On ground)	CM	477.34	500.55	3,720.86	1,174.69	5,873.43
401ciii	CONCRETE CLASS "C" (Elevated)	CM	477.34	500.55	3,957.54	1,233.86	6,169.28
401d	CONCRETE CLASS "D1"	CM	742.15	1,265.57	5,369.93	1,844.41	9,222.06
401e	CONCRETE CLASS "Y"	CM	1,006.57	500.55	4,824.04	1,582.79	7,913.94
401f	LEAN CONCRETE	CM	402.58	507.52	2,534.23	861.08	4,305.40
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,582.71	947.15	5,049.44	1,894.82	9,474.12
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,582.71	947.15	5,805.44	2,083.82	10,419.12
401gii	PRECAST CONCRETE CLASS "B"	CM	1,582.71	947.15	4,791.61	1,830.37	9,151.84
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,582.71	947.15	6,183.44	2,178.32	10,891.62

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,582.71	947.15	6,561.44	2,272.82	11,364.12
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,582.71	947.15	6,939.44	2,367.32	11,836.62
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,472.59	781.47	59,888.00	15,535.51	77,677.57
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,472.59	781.47	67,238.00	17,373.01	86,865.07
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,183.89	5,393.81	55,633.72	15,552.86	77,764.28
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,431.04	15,659.05	133,764.81	37,963.72	189,818.62
405b	LAUNCHING OF GIRDER	TON	55.51	532.52	-	147.01	735.04
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	103.38	-	299.26	100.66	503.30
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	103.38	-	293.15	99.13	495.67
406c	STEEL EXPANSION JOINTS	KG	8.45	26.40	90.12	31.24	156.21
406d	WATER STOPS 6" SIZE	M	90.88	-	464.95	138.96	694.79
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	39.44	-	2,877.11	729.14	3,645.69
406g	STEEL OR METAL BEARING DEVICES	KG	18.84	69.68	116.19	51.18	255.89
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	302.30	1,654.04	716.37	668.18	3,340.89
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	453.45	2,481.06	1,074.56	1,002.27	5,011.34
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	453.45	2,481.06	814.11	937.16	4,685.78
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	755.75	4,135.11	990.82	1,470.42	7,352.09
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	647.78	4,884.94	1,169.51	1,675.56	8,377.79
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,133.62	6,909.78	1,280.35	2,330.94	11,654.68
407h	PILE LOAD TEST UP TO 120 TON	EACH	20,200.61	45,769.30	93,113.42	39,770.83	198,854.17
407i	PILE LOAD TEST UP TO 240 TON	EACH	36,744.05	45,769.30	186,226.84	67,185.05	335,925.25
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,287.49	50,188.38	279,340.26	95,704.03	478,520.17
407k	CONFIRMATORY BORING (NX SIZE)	M	166.83	1,582.02	6.37	438.80	2,194.02
410	BRICK WORK	CM	305.98	282.72	2,779.93	842.16	4,210.78
411a	STONE MASONRY RANDOM DRY	CM	264.21	107.96	612.88	246.26	1,231.31
411b	STONE MASONRY RANDOM WITH MORTAR	CM	284.72	166.68	1,684.12	533.88	2,669.40
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	342.00	107.96	678.99	282.24	1,411.19
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	401.42	166.68	1,750.04	579.54	2,897.68

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	64.56	11.74	44.50	30.20	151.00
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	536.49	264.08	1,655.24	613.95	3,069.76
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	205.17	437.48	644.80	321.86	1,609.31
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	197.83	577.19	835.85	402.72	2,013.58
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	199.81	935.96	1,006.96	535.68	2,678.41
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	206.71	1,146.39	1,557.96	727.77	3,638.83
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	238.63	1,078.41	2,201.03	879.52	4,397.59
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	297.07	1,331.30	3,617.86	1,311.56	6,557.79
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	384.44	1,481.41	4,683.80	1,637.41	8,187.06
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	452.17	1,798.85	5,968.69	2,054.93	10,274.64
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	535.87	2,098.66	9,218.63	2,963.29	14,816.46
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	205.17	507.33	664.56	344.27	1,721.33
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	197.83	577.19	782.86	389.47	1,947.35
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	194.56	935.96	957.81	522.08	2,610.41
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	206.71	1,146.39	1,592.72	736.46	3,682.28
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	238.63	1,078.41	3,026.70	1,085.94	5,429.68
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	297.07	1,331.30	4,443.86	1,518.06	7,590.29
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	384.44	1,481.41	6,205.98	2,017.96	10,089.78
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	452.17	1,798.85	8,414.90	2,666.48	13,332.40
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	535.87	2,098.66	11,834.38	3,617.23	18,086.14
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	85.10	118.93	458.34	165.59	827.96
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	730.77	612.95	3,612.04	1,238.94	6,194.70
507a	STEEL WIRE MESH FOR GABIONS	KG	4.98	-	104.94	27.48	137.40
507b	ROCK FILL IN GABIONS	CM	87.57	-	400.44	122.00	610.01
508a	BRICK PAVING (SINGLE COURSE)	SM	100.24	32.70	209.40	85.58	427.92
508b	BRICK PAVING (DOUBLE COURSE)	SM	178.03	32.70	415.87	156.65	783.25
509a	RIP RAP CLASS "A"	CM	436.79	-	518.08	238.72	1,193.58
509b	RIP RAP CLASS "B"	CM	419.02	-	513.93	233.24	1,166.19
509c	RIP RAP CLASS "C"	CM	420.85	-	518.08	234.73	1,173.66

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	532.13	102.14	1,939.11	643.35	3,216.74
509e	GROUTED RIP RAP CLASS "B"	CM	511.71	81.72	1,787.36	595.20	2,975.98
509f	GROUTED RIP RAP CLASS "C"	CM	504.22	68.10	1,834.12	601.61	3,008.05
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	728.52	353.02	4,173.43	1,313.74	6,568.71
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	43.48	191.97	399.70	158.79	793.94
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	92.38	390.69	-	120.77	603.84
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	139.69	67.48	84.19	72.84	364.20
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	178.81	86.37	107.76	93.23	466.17
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	226.34	180.32	379.15	196.45	982.27
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	282.92	225.40	473.94	245.57	1,227.83
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	261.33	572.25	2,259.18	773.19	3,865.94
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	869.56	670.54	4,110.94	1,412.76	7,063.79
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	126.83	90.27	437.59	163.67	818.36
603	BRICK EDGING	M	8.20	-	33.22	10.36	51.78
604a	METAL GUARD RAIL	M	17.35	70.84	1,579.36	416.89	2,084.44
604b	METAL GUARD RAIL END PIECES	EACH	21.29	-	1,197.58	304.72	1,523.58
604d	STEEL POST OF METAL GUARD RAIL	EACH	84.45	976.73	3,776.31	1,209.37	6,046.86
605a	CONCRETE BEAM GUARD RAIL	M	65.56	30.82	594.47	172.71	863.56
605c	CONCRETE POST FOR GUARD RAIL	M	80.49	27.36	595.33	175.80	878.98
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	213.55	255.15	6,865.56	1,833.56	9,167.82
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	64.98	382.72	9,270.69	2,429.60	12,148.00
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	213.55	541.89	11,907.57	3,165.75	15,828.75
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	667.00	598.64	20,995.12	5,565.19	27,825.95
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	133.40	119.73	9,226.43	2,369.89	11,849.45
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	278.23	-	1,306.06	396.07	1,980.36
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	278.23	-	1,959.09	559.33	2,796.65
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.66	5.86	16.18	6.17	30.87
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.89	4.03	39.81	11.18	55.91
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.66	5.86	21.59	7.53	37.63

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.89	4.03	53.10	14.50	72.52
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.94	5.22	156.32	56.62	283.09
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.94	9.98	501.66	144.15	720.74
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.33	8.59	22.49	8.60	43.01
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.33	9.63	67.50	20.12	100.58
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.33	6.95	29.99	10.07	50.34
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.33	9.63	90.01	25.74	128.71
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	64.94	3.73	217.17	71.46	357.30
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	64.94	7.90	851.20	231.01	1,155.05
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	54.68	3.73	104.21	40.65	203.27
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	54.68	7.90	334.95	99.38	496.91
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	54.68	3.73	144.78	50.80	253.99
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	54.68	7.90	568.32	157.73	788.63
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.92	81.62	193.86	71.10	355.50
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.92	81.62	233.86	81.10	405.49
610b	RIGHT OF WAY MARKER	EACH	91.40	121.33	303.85	129.15	645.73
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	556.35	976.31	2,046.41	894.77	4,473.83
610d	TEN KILOMETRE POST	EACH	1,064.83	1,952.61	4,488.89	1,876.58	9,382.91
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	120.69	91.00	955.18	291.72	1,458.58

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

OMAR KOT
(50-A)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.68	10.10	-	2.70	13.48
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.86	173.32	1.17	45.34	226.68
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.65	456.54	2.63	119.70	598.52
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	78.60	1,826.16	10.51	478.82	2,394.09
103	STRIPPING	CM	2.37	93.22	-	23.90	119.49
104	COMPACTION OF NATURAL GROUND	SM	0.34	9.91	0.76	2.75	13.76
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.17	135.76	-	34.98	174.91
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	117.70	316.30	50.82	121.21	606.03
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	16.28	337.99	-	88.57	442.84
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	10.58	262.40	-	68.24	341.22
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.41	120.27	-	30.92	154.60
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	117.70	316.30	50.82	121.21	606.03
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	18.71	316.03	-	83.69	418.43
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.23	263.92	-	68.04	340.19
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.79	137.60	0.38	36.19	180.97
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	57.00	287.11	70.80	103.73	518.64
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	103.94	427.01	33.88	141.21	706.04
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	87.97	292.53	-	95.13	475.63
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	53.46	238.86	-	73.08	365.40
107d	GRANULAR BACK FILL	CM	31.90	137.14	611.94	195.25	976.23
107e	COMMON BACK FILL	CM	23.68	62.84	5.09	22.90	114.52
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.45	174.71	5.09	46.56	232.82
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	18.93	482.48	54.04	138.86	694.32
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.20	416.71	2.42	108.33	541.66
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	12.62	369.34	-	95.49	477.46
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.39	177.46	7.94	48.20	240.98
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	5.83	76.32	5.09	21.81	109.04
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.57	110.29	3.03	31.72	158.61
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.30	27.34	1.46	7.52	37.62

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.94	18.21	0.77	4.98	24.91
110	IMPROVED SUB-GRADE	CM	9.47	120.02	55.27	46.19	230.95
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.80	15.26	0.79	4.21	21.07
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.18	15.57	0.90	4.41	22.06
201	GRANULAR SUB-BASE	CM	7.49	255.06	690.24	238.20	1,190.99
202	AGGREGATE BASE	CM	8.89	326.54	917.23	313.16	1,565.82
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	68.09	1,510.17	6,149.71	1,931.99	9,659.96
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	70.34	1,510.17	6,532.81	2,028.33	10,141.66
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	75.08	1,577.28	6,140.67	1,948.26	9,741.29
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	75.08	1,571.31	6,675.48	2,080.47	10,402.33
204b	CEMENT STABILIZED BASE	CM	27.17	569.10	1,330.56	481.71	2,408.55
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	221.04	915.38	51,016.95	13,038.34	65,191.71
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	221.04	915.38	49,438.82	12,643.81	63,219.05
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	89.24	112.80	1,160.41	340.61	1,703.07
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	139.00	2,437.94	5,862.84	2,109.95	10,549.73
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	98.38	126.27	911.21	283.97	1,419.83
207a	DEEP PATCHING (0-15 cm)	SM	1.63	45.04	1.26	11.98	59.91
207b	DEEP PATCHING (16-30 cm)	SM	1.63	39.67	1.26	10.64	53.20
208	REINSTATEMENT OF ROAD SURFACE	SM	1.77	57.10	0.56	14.86	74.29
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.95	110.61	0.68	28.31	141.55
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.39	22.12	0.14	5.66	28.31
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.57	36.21	9.51	47.57
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.57	40.42	10.56	52.82
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.58	15.15	3.96	19.81
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.58	17.68	4.59	22.96
304a	SINGLE SURFACE TREATMENT	SM	0.72	7.57	73.19	20.37	101.85
304b	DOUBLE SURFACE TREATMENT	SM	1.05	14.15	142.94	39.53	197.67
304c	TRIPLE SURFACE TREATMENT	SM	1.76	19.94	163.22	46.23	231.15
304d	SEAL COAT	SM	0.67	4.12	51.62	14.10	70.50

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	63.91	1,489.33	7,145.88	2,174.78	10,873.90
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	63.91	1,438.23	7,699.63	2,300.44	11,502.21
307a	DENSE GRADED HOT BIT-MAC	CM	159.57	379.77	5,926.50	1,616.46	8,082.30
307b	OPEN GRADED HOT BIT-MAC	CM	159.57	379.77	5,762.36	1,575.43	7,877.13
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.90	590.65	2,070.69	672.31	3,361.55
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	24.10	650.70	43,036.24	10,927.76	54,638.80
309a	COLD MILLING, 0 - 30 mm	SM	0.91	24.99	8.68	8.64	43.22
309b	COLD MILLING, 0 - 50 mm	SM	1.51	41.65	14.46	14.41	72.03
309c	COLD MILLING, 0 - 70 mm	SM	2.26	62.48	21.69	21.61	108.04
401a1i	CONCRETE CLASS "A1" (Underground)	CM	471.59	1,059.94	4,205.88	1,434.35	7,171.76
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	471.59	1,059.94	4,483.35	1,503.72	7,518.60
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	471.59	1,059.94	5,038.30	1,642.46	8,212.28
401a2i	CONCRETE CLASS "A2" (Underground)	CM	471.59	1,059.94	4,583.88	1,528.85	7,644.26
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	471.59	1,059.94	4,861.35	1,598.22	7,991.10
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	471.59	1,059.94	5,416.30	1,736.96	8,684.78
401a3i	CONCRETE CLASS "A3" (Underground)	CM	471.59	1,059.94	4,961.88	1,623.35	8,116.76
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	471.59	1,059.94	5,239.35	1,692.72	8,463.60
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	471.59	1,059.94	5,794.30	1,831.46	9,157.28
401b	CONCRETE CLASS "B"	CM	620.92	805.93	3,431.07	1,214.48	6,072.41
401ci	CONCRETE CLASS "C" (Underground)	CM	465.11	500.55	3,799.69	1,191.34	5,956.68
401cii	CONCRETE CLASS "C" (On ground)	CM	465.11	500.55	3,918.03	1,220.92	6,104.61
401ciii	CONCRETE CLASS "C" (Elevated)	CM	465.11	500.55	4,154.72	1,280.09	6,400.46
401d	CONCRETE CLASS "D1"	CM	724.30	1,265.57	5,522.25	1,878.03	9,390.15
401e	CONCRETE CLASS "Y"	CM	994.55	500.55	4,977.08	1,618.04	8,090.22
401f	LEAN CONCRETE	CM	408.23	507.52	2,701.98	904.43	4,522.15
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,566.05	947.15	5,231.70	1,936.22	9,681.12
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,566.05	947.15	5,987.70	2,125.22	10,626.12
401gii	PRECAST CONCRETE CLASS "B"	CM	1,566.05	947.15	4,977.02	1,872.55	9,362.77
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,566.05	947.15	6,365.70	2,219.72	11,098.62

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,566.05	947.15	6,743.70	2,314.22	11,571.12
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,566.05	947.15	7,121.70	2,408.72	12,043.62
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,414.20	781.47	59,888.00	15,520.92	77,604.59
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,414.20	781.47	67,238.00	17,358.42	86,792.09
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,161.64	5,393.81	55,629.85	15,546.33	77,731.63
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,225.36	15,659.05	133,774.58	37,914.75	189,573.74
405b	LAUNCHING OF GIRDER	TON	51.40	532.52	-	145.98	729.91
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	104.07	-	298.92	100.75	503.74
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	104.07	-	292.83	99.23	496.13
406c	STEEL EXPANSION JOINTS	KG	8.49	26.40	90.12	31.25	156.25
406d	WATER STOPS 6" SIZE	M	91.35	-	464.09	138.86	694.30
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	34.80	-	2,877.77	728.14	3,640.70
406g	STEEL OR METAL BEARING DEVICES	KG	18.69	69.68	116.19	51.14	255.70
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	279.51	1,654.04	812.63	686.55	3,432.73
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	419.27	2,481.06	1,218.95	1,029.82	5,149.10
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	419.27	2,481.06	912.75	953.27	4,766.35
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	698.78	4,135.11	1,094.21	1,482.02	7,410.12
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	598.95	4,884.94	1,281.38	1,691.32	8,456.59
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,048.17	6,909.78	1,401.11	2,339.76	11,698.82
407h	PILE LOAD TEST UP TO 120 TON	EACH	21,941.10	45,769.30	113,085.02	45,198.86	225,994.28
407i	PILE LOAD TEST UP TO 240 TON	EACH	40,901.72	45,769.30	226,170.04	78,210.27	391,051.33
407j	PILE LOAD TEST UP TO 360 TON	EACH	59,862.34	50,188.38	339,255.06	112,326.45	561,632.23
407k	CONFIRMATORY BORING (NX SIZE)	M	171.19	1,582.02	6.37	439.89	2,199.47
410	BRICK WORK	CM	280.60	282.72	2,800.52	840.96	4,204.80
411a	STONE MASONRY RANDOM DRY	CM	248.39	107.96	749.77	276.53	1,382.66
411b	STONE MASONRY RANDOM WITH MORTAR	CM	264.42	166.68	1,840.50	567.90	2,839.50
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	322.58	107.96	826.84	314.35	1,571.74
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	375.71	166.68	1,912.52	613.73	3,068.63

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	58.45	11.74	44.83	28.76	143.78
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	508.06	264.08	1,817.71	647.46	3,237.32
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	212.07	437.48	645.41	323.74	1,618.71
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	206.50	577.19	836.58	405.07	2,025.33
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	201.52	935.96	1,007.81	536.32	2,681.61
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	211.93	1,146.39	1,558.96	729.32	3,646.60
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	243.94	1,078.41	2,202.03	881.10	4,405.48
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	300.31	1,331.30	3,619.30	1,312.73	6,563.63
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	388.63	1,481.41	4,685.23	1,638.82	8,194.09
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	460.46	1,798.85	5,970.43	2,057.44	10,287.18
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	540.53	2,098.66	9,220.66	2,964.96	14,824.82
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	212.07	507.33	665.78	346.30	1,731.49
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	206.50	577.19	783.59	391.82	1,959.10
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	195.50	935.96	958.66	522.53	2,612.65
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	211.93	1,146.39	1,593.50	737.95	3,689.77
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	243.94	1,078.41	3,027.81	1,087.54	5,437.71
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	300.31	1,331.30	4,445.30	1,519.23	7,596.13
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	388.63	1,481.41	6,207.41	2,019.36	10,096.81
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	460.46	1,798.85	8,416.64	2,668.99	13,344.94
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	540.53	2,098.66	11,836.41	3,618.90	18,094.51
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	85.26	118.93	608.12	203.08	1,015.38
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	704.54	612.95	3,781.07	1,274.64	6,373.20
507a	STEEL WIRE MESH FOR GABIONS	KG	4.71	-	104.81	27.38	136.90
507b	ROCK FILL IN GABIONS	CM	91.87	-	472.94	141.20	706.01
508a	BRICK PAVING (SINGLE COURSE)	SM	96.08	32.70	221.31	87.52	437.61
508b	BRICK PAVING (DOUBLE COURSE)	SM	170.27	32.70	437.42	160.10	800.49
509a	RIP RAP CLASS "A"	CM	410.49	-	654.96	266.36	1,331.81
509b	RIP RAP CLASS "B"	CM	396.17	-	649.72	261.47	1,307.37
509c	RIP RAP CLASS "C"	CM	397.31	-	654.96	263.07	1,315.34

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	502.29	102.14	2,088.19	673.15	3,365.77
509e	GROUTED RIP RAP CLASS "B"	CM	482.43	81.72	1,934.07	624.55	3,122.77
509f	GROUTED RIP RAP CLASS "C"	CM	476.22	68.10	1,982.38	631.67	3,158.37
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	718.92	353.02	4,333.31	1,351.31	6,756.57
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	45.74	191.97	612.53	212.56	1,062.81
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	91.65	390.69	-	120.59	602.93
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	132.54	67.48	106.43	76.61	383.06
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	169.65	86.37	136.23	98.06	490.31
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	212.15	180.32	412.47	201.24	1,006.18
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	265.19	225.40	515.59	251.54	1,257.72
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	250.12	572.25	2,345.78	792.04	3,960.19
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	858.01	670.54	4,205.72	1,433.56	7,167.82
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	124.87	90.27	455.75	167.72	838.61
603	BRICK EDGING	M	7.95	-	33.31	10.31	51.57
604a	METAL GUARD RAIL	M	15.99	70.84	1,579.36	416.55	2,082.73
604b	METAL GUARD RAIL END PIECES	EACH	20.66	-	1,197.58	304.56	1,522.80
604d	STEEL POST OF METAL GUARD RAIL	EACH	74.85	976.73	3,776.31	1,206.97	6,034.86
605a	CONCRETE BEAM GUARD RAIL	M	67.87	30.82	601.07	174.94	874.71
605c	CONCRETE POST FOR GUARD RAIL	M	83.34	27.36	603.37	178.52	892.59
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	212.56	255.15	6,883.44	1,837.79	9,188.94
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	64.17	382.72	9,301.69	2,437.15	12,185.73
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	212.56	541.89	11,958.66	3,178.28	15,891.38
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	709.04	598.64	21,071.48	5,594.79	27,973.95
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	141.81	119.73	9,241.37	2,375.73	11,878.63
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	244.36	-	1,305.96	387.58	1,937.90
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	244.36	-	1,958.94	550.83	2,754.13
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.63	5.86	16.18	6.17	30.83
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.88	4.03	39.80	11.18	55.89
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.63	5.86	21.59	7.52	37.59

District: Omar Kot **District Code: 50-A**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.88	4.03	53.09	14.50	72.49
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.61	5.22	156.32	56.04	280.18
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.61	9.98	501.60	143.55	717.74
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.28	8.59	22.49	8.59	42.96
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.28	9.63	67.50	20.10	100.52
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.28	6.95	29.99	10.06	50.28
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.28	9.63	90.01	25.73	128.65
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.61	3.73	217.17	70.88	354.39
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.61	7.90	851.20	230.43	1,152.13
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	52.99	3.73	104.21	40.23	201.16
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	52.99	7.90	334.90	98.95	494.74
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	52.99	3.73	144.78	50.38	251.88
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	52.99	7.90	568.32	157.30	786.52
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.58	81.62	193.88	71.02	355.10
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.58	81.62	233.88	81.02	405.10
610b	RIGHT OF WAY MARKER	EACH	97.06	121.33	310.82	132.30	661.50
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	557.24	976.31	2,103.16	909.18	4,545.88
610d	TEN KILOMETRE POST	EACH	1,082.43	1,952.61	4,602.08	1,909.28	9,546.40
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	118.32	91.00	963.63	293.24	1,466.18

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

SANGHAR
(59)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.64	10.10	-	2.68	13.42
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.61	173.32	1.17	45.27	226.37
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	18.55	456.54	2.63	119.43	597.15
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	74.21	1,826.16	10.51	477.72	2,388.60
103	STRIPPING	CM	2.36	93.22	-	23.89	119.47
104	COMPACTION OF NATURAL GROUND	SM	0.34	9.91	0.76	2.75	13.76
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.59	135.76	-	35.09	175.43
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	126.06	316.30	50.82	123.30	616.48
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.28	337.99	-	88.82	444.09
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.41	262.40	-	68.45	342.26
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.75	120.27	-	31.01	155.03
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	126.06	316.30	50.82	123.30	616.48
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	20.09	316.03	-	84.03	420.15
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.79	263.92	-	68.18	340.89
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.41	137.60	0.38	36.35	181.73
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	60.15	287.11	70.80	104.52	522.58
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	111.61	427.01	33.88	143.13	715.64
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	94.35	292.53	-	96.72	483.60
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	57.40	238.86	-	74.07	370.33
107d	GRANULAR BACK FILL	CM	31.71	137.14	527.39	174.06	870.30
107e	COMMON BACK FILL	CM	21.77	62.84	5.09	22.42	112.12
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.96	174.71	5.09	46.69	233.45
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.72	482.48	54.04	139.06	695.30
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.79	416.71	2.42	108.48	542.40
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.15	369.34	-	95.62	478.11
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.78	177.46	7.94	48.29	241.47
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.22	76.32	5.09	21.91	109.53
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.88	110.29	3.03	31.80	159.00
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.38	27.34	1.46	7.54	37.71

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.00	18.21	0.77	5.00	24.98
110	IMPROVED SUB-GRADE	CM	9.80	120.02	55.27	46.27	231.36
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.81	15.26	0.79	4.22	21.08
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.23	15.57	0.90	4.42	22.12
201	GRANULAR SUB-BASE	CM	7.95	255.06	621.53	221.14	1,105.68
202	AGGREGATE BASE	CM	9.60	326.54	825.41	290.39	1,451.93
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	65.88	1,510.17	6,099.46	1,918.88	9,594.38
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	68.55	1,510.17	6,489.64	2,017.09	10,085.44
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	73.58	1,577.28	6,090.39	1,935.32	9,676.58
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	73.58	1,571.31	6,632.25	2,069.28	10,346.42
204b	CEMENT STABILIZED BASE	CM	28.67	569.10	1,279.16	469.23	2,346.16
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	234.33	915.38	50,916.96	13,016.67	65,083.33
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	234.33	915.38	49,338.83	12,622.13	63,110.67
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	81.39	112.80	1,144.41	334.65	1,673.24
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	139.77	2,437.94	5,829.48	2,101.80	10,508.99
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	89.36	126.27	831.46	261.77	1,308.87
207a	DEEP PATCHING (0-15 cm)	SM	1.72	45.04	1.26	12.00	60.02
207b	DEEP PATCHING (16-30 cm)	SM	1.72	39.67	1.26	10.66	53.32
208	REINSTATEMENT OF ROAD SURFACE	SM	1.87	57.10	0.56	14.88	74.42
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.13	110.61	0.68	28.35	141.77
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.43	22.12	0.14	5.67	28.35
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.57	36.14	9.50	47.50
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.57	40.34	10.55	52.75
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.12	3.96	19.78
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.64	4.59	22.93
304a	SINGLE SURFACE TREATMENT	SM	0.77	7.57	72.91	20.31	101.57
304b	DOUBLE SURFACE TREATMENT	SM	1.13	14.15	142.36	39.41	197.05
304c	TRIPLE SURFACE TREATMENT	SM	1.91	19.94	162.53	46.09	230.47
304d	SEAL COAT	SM	0.72	4.12	51.36	14.05	70.25

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	63.36	1,489.33	7,095.77	2,162.12	10,810.58
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	63.36	1,438.23	7,644.46	2,286.51	11,432.56
307a	DENSE GRADED HOT BIT-MAC	CM	154.92	379.77	5,874.12	1,602.20	8,011.01
307b	OPEN GRADED HOT BIT-MAC	CM	154.92	379.77	5,721.11	1,563.95	7,819.76
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	27.33	590.65	2,065.27	670.81	3,354.06
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	23.78	650.70	42,933.28	10,901.94	54,509.70
309a	COLD MILLING, 0 - 30 mm	SM	0.95	24.99	8.68	8.65	43.27
309b	COLD MILLING, 0 - 50 mm	SM	1.58	41.65	14.46	14.42	72.12
309c	COLD MILLING, 0 - 70 mm	SM	2.37	62.48	21.69	21.64	108.18
401a1i	CONCRETE CLASS "A1" (Underground)	CM	503.64	1,059.94	4,194.86	1,439.61	7,198.05
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	503.64	1,059.94	4,472.34	1,508.98	7,544.89
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	503.64	1,059.94	5,027.28	1,647.72	8,238.58
401a2i	CONCRETE CLASS "A2" (Underground)	CM	503.64	1,059.94	4,572.86	1,534.11	7,670.55
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	503.64	1,059.94	4,850.34	1,603.48	8,017.39
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	503.64	1,059.94	5,405.28	1,742.22	8,711.08
401a3i	CONCRETE CLASS "A3" (Underground)	CM	503.64	1,059.94	4,950.86	1,628.61	8,143.05
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	503.64	1,059.94	5,228.34	1,697.98	8,489.89
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	503.64	1,059.94	5,783.28	1,836.72	9,183.58
401b	CONCRETE CLASS "B"	CM	645.12	805.93	3,442.28	1,223.33	6,116.66
401ci	CONCRETE CLASS "C" (Underground)	CM	481.56	500.55	3,796.65	1,194.69	5,973.45
401cii	CONCRETE CLASS "C" (On ground)	CM	481.56	500.55	3,914.99	1,224.27	6,121.37
401ciii	CONCRETE CLASS "C" (Elevated)	CM	481.56	500.55	4,151.68	1,283.45	6,417.23
401d	CONCRETE CLASS "D1"	CM	773.35	1,265.57	5,514.06	1,888.24	9,441.22
401e	CONCRETE CLASS "Y"	CM	1,052.42	500.55	4,961.08	1,628.51	8,142.56
401f	LEAN CONCRETE	CM	394.90	507.52	2,713.33	903.94	4,519.68
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,589.07	947.15	5,218.71	1,938.73	9,693.66
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,589.07	947.15	5,974.71	2,127.73	10,638.66
401gii	PRECAST CONCRETE CLASS "B"	CM	1,589.07	947.15	4,986.70	1,880.73	9,403.65
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,589.07	947.15	6,352.71	2,222.23	11,111.16

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,589.07	947.15	6,730.71	2,316.73	11,583.66
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,589.07	947.15	7,108.71	2,411.23	12,056.16
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,515.22	781.47	59,888.00	15,546.17	77,730.86
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,515.22	781.47	67,238.00	17,383.67	86,918.36
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,268.69	5,393.81	55,596.48	15,564.74	77,823.72
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,537.19	15,659.05	133,766.88	37,990.78	189,953.90
405b	LAUNCHING OF GIRDER	TON	58.30	532.52	-	147.71	738.53
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	107.94	-	296.70	101.16	505.81
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	107.94	-	290.78	99.68	498.41
406c	STEEL EXPANSION JOINTS	KG	9.10	26.40	90.19	31.42	157.11
406d	WATER STOPS 6" SIZE	M	92.52	-	464.67	139.30	696.48
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	38.07	-	2,871.11	727.30	3,636.48
406g	STEEL OR METAL BEARING DEVICES	KG	19.73	69.68	116.25	51.42	257.08
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	311.28	1,654.04	810.52	693.96	3,469.81
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	466.92	2,481.06	1,215.79	1,040.94	5,204.71
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	466.92	2,481.06	909.52	964.38	4,821.88
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	778.20	4,135.11	1,088.83	1,500.54	7,502.68
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	667.03	4,884.94	1,272.59	1,706.14	8,530.71
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,167.31	6,909.78	1,393.04	2,367.53	11,837.66
407h	PILE LOAD TEST UP TO 120 TON	EACH	19,978.57	45,769.30	114,557.26	45,076.28	225,381.42
407i	PILE LOAD TEST UP TO 240 TON	EACH	36,522.01	45,769.30	229,114.52	77,851.46	389,257.30
407j	PILE LOAD TEST UP TO 360 TON	EACH	53,065.45	50,188.38	343,671.78	111,731.40	558,657.02
407k	CONFIRMATORY BORING (NX SIZE)	M	172.72	1,582.02	6.37	440.28	2,201.39
410	BRICK WORK	CM	291.29	282.72	2,831.12	851.28	4,256.42
411a	STONE MASONRY RANDOM DRY	CM	253.47	107.96	731.27	273.18	1,365.88
411b	STONE MASONRY RANDOM WITH MORTAR	CM	272.62	166.68	1,841.50	570.20	2,851.00
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	328.53	107.96	805.69	310.55	1,552.73
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	385.21	166.68	1,905.99	614.47	3,072.35

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	61.57	11.74	45.15	29.62	148.09
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	516.18	264.08	1,811.18	647.86	3,239.30
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	197.89	437.48	646.02	320.35	1,601.74
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	191.79	577.19	837.32	401.57	2,007.86
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	194.03	935.96	1,008.66	534.66	2,673.31
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	201.46	1,146.39	1,559.96	726.95	3,634.76
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	233.37	1,078.41	2,203.03	878.70	4,393.52
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	291.19	1,331.30	3,620.74	1,310.81	6,554.04
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	376.84	1,481.41	4,686.66	1,636.23	8,181.14
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	443.91	1,798.85	5,972.17	2,053.73	10,268.67
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	525.10	2,098.66	9,222.69	2,961.61	14,808.07
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	197.89	507.33	667.00	343.06	1,715.29
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	191.79	577.19	784.33	388.32	1,941.62
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	188.78	935.96	959.51	521.06	2,605.31
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	201.46	1,146.39	1,594.27	735.53	3,677.65
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	233.37	1,078.41	3,028.92	1,085.18	5,425.88
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	291.19	1,331.30	4,446.74	1,517.31	7,586.54
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	376.84	1,481.41	6,208.84	2,016.77	10,083.86
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	443.91	1,798.85	8,418.38	2,665.29	13,326.43
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	525.10	2,098.66	11,838.44	3,615.55	18,077.75
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	80.34	118.93	619.17	204.61	1,023.05
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	730.69	612.95	3,792.28	1,283.98	6,419.89
507a	STEEL WIRE MESH FOR GABIONS	KG	4.95	-	104.56	27.38	136.88
507b	ROCK FILL IN GABIONS	CM	84.46	-	480.08	141.13	705.67
508a	BRICK PAVING (SINGLE COURSE)	SM	96.62	32.70	223.85	88.29	441.46
508b	BRICK PAVING (DOUBLE COURSE)	SM	171.68	32.70	442.32	161.67	808.37
509a	RIP RAP CLASS "A"	CM	418.43	-	636.46	263.72	1,318.61
509b	RIP RAP CLASS "B"	CM	402.14	-	631.37	258.38	1,291.89
509c	RIP RAP CLASS "C"	CM	404.05	-	636.46	260.13	1,300.64

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	511.04	102.14	2,081.87	673.76	3,368.82
509e	GROUTED RIP RAP CLASS "B"	CM	491.55	81.72	1,926.64	624.98	3,124.88
509f	GROUTED RIP RAP CLASS "C"	CM	484.68	68.10	1,975.25	632.01	3,160.04
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	714.49	353.02	4,343.87	1,352.85	6,764.23
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	42.89	191.97	528.57	190.86	954.30
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	90.59	390.69	-	120.32	601.60
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	133.52	67.48	103.43	76.10	380.52
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	170.90	86.37	132.38	97.41	487.07
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	216.24	180.32	413.30	202.47	1,012.33
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	270.30	225.40	516.62	253.08	1,265.41
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	267.00	572.25	2,339.97	794.80	3,974.02
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	873.02	670.54	4,198.96	1,435.63	7,178.15
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	126.74	90.27	455.27	168.07	840.35
603	BRICK EDGING	M	7.85	-	33.60	10.36	51.81
604a	METAL GUARD RAIL	M	17.05	70.84	1,579.36	416.81	2,084.07
604b	METAL GUARD RAIL END PIECES	EACH	21.04	-	1,197.58	304.65	1,523.27
604d	STEEL POST OF METAL GUARD RAIL	EACH	80.24	976.73	3,776.31	1,208.32	6,041.60
605a	CONCRETE BEAM GUARD RAIL	M	65.03	30.82	600.45	174.08	870.39
605c	CONCRETE POST FOR GUARD RAIL	M	79.85	27.36	602.62	177.46	887.29
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	214.81	255.15	6,879.67	1,837.41	9,187.04
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	64.14	382.72	9,300.33	2,436.80	12,183.99
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	214.81	541.89	11,957.95	3,178.66	15,893.30
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	672.99	598.64	21,068.42	5,585.01	27,925.07
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	134.60	119.73	9,238.36	2,373.17	11,865.86
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	263.82	-	1,305.24	392.27	1,961.33
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	263.82	-	1,957.86	555.42	2,777.10
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.56	5.86	16.17	6.15	30.74
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.85	4.03	39.75	11.16	55.79
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.56	5.86	21.58	7.50	37.50

District: Sanghar **District Code: 59**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.85	4.03	53.02	14.48	72.38
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	69.34	5.22	156.26	57.70	288.52
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	69.34	9.98	500.94	145.07	725.33
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.21	8.59	22.49	8.57	42.85
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.21	9.63	67.50	20.09	100.43
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.21	6.95	29.98	10.03	50.17
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.21	9.63	90.01	25.71	128.55
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	69.34	3.73	217.12	72.55	362.73
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	69.34	7.90	851.20	232.11	1,160.55
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	57.85	3.73	104.17	41.44	207.19
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	57.85	7.90	334.46	100.05	500.27
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	57.85	3.73	144.74	51.58	257.91
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	57.85	7.90	568.32	158.52	792.59
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.88	81.62	193.90	71.10	355.50
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.88	81.62	233.90	81.10	405.50
610b	RIGHT OF WAY MARKER	EACH	90.03	121.33	310.18	130.38	651.92
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	555.90	976.31	2,098.61	907.70	4,538.52
610d	TEN KILOMETRE POST	EACH	1,073.50	1,952.61	4,591.68	1,904.45	9,522.24
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	119.69	91.00	963.68	293.59	1,467.97

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

SHIKARPUR
(62)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.73	10.10	-	2.71	13.54
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.27	173.32	1.17	45.44	227.20
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	20.96	456.54	2.63	120.03	600.16
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	83.85	1,826.16	10.51	480.13	2,400.65
103	STRIPPING	CM	2.49	93.22	-	23.93	119.64
104	COMPACTION OF NATURAL GROUND	SM	0.35	9.91	0.76	2.76	13.78
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.23	135.76	-	35.00	174.99
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	125.63	316.30	50.82	123.19	615.93
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.80	337.99	-	88.95	444.74
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.58	262.40	-	68.49	342.47
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.46	120.27	-	30.93	154.67
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	125.63	316.30	50.82	123.19	615.93
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.96	316.03	-	84.00	419.99
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	9.00	263.92	-	68.23	341.16
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.08	137.60	0.38	36.26	181.32
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	59.94	287.11	70.80	104.46	522.32
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	110.90	427.01	33.88	142.95	714.74
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	94.31	292.53	-	96.71	483.56
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	57.03	238.86	-	73.97	369.87
107d	GRANULAR BACK FILL	CM	33.86	137.14	415.75	146.69	733.43
107e	COMMON BACK FILL	CM	25.31	62.84	5.09	23.31	116.55
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.96	174.71	5.09	46.69	233.45
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	20.38	482.48	54.04	139.23	696.13
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	15.29	416.71	2.42	108.60	543.02
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.59	369.34	-	95.73	478.67
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.98	177.46	7.94	48.34	241.72
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.27	76.32	5.09	21.92	109.60
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	14.58	110.29	3.03	31.98	159.88
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.39	27.34	1.46	7.55	37.73

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.00	18.21	0.77	5.00	24.98
110	IMPROVED SUB-GRADE	CM	10.18	120.02	55.27	46.37	231.83
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.85	15.26	0.79	4.23	21.13
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.27	15.57	0.90	4.43	22.17
201	GRANULAR SUB-BASE	CM	8.09	255.06	515.99	194.78	973.92
202	AGGREGATE BASE	CM	9.56	326.54	705.13	260.31	1,301.54
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	73.97	1,510.17	5,941.36	1,881.38	9,406.88
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	76.44	1,510.17	6,354.77	1,985.34	9,926.72
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	81.63	1,577.28	5,931.72	1,897.66	9,488.29
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	81.63	1,571.31	6,499.26	2,038.05	10,190.25
204b	CEMENT STABILIZED BASE	CM	29.28	569.10	1,040.39	409.70	2,048.48
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	233.89	915.38	51,674.46	13,205.93	66,029.66
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	233.89	915.38	50,096.33	12,811.40	64,057.00
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	96.74	112.80	968.30	294.46	1,472.30
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	150.80	2,437.94	5,664.37	2,063.28	10,316.40
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	106.96	126.27	732.48	241.43	1,207.15
207a	DEEP PATCHING (0-15 cm)	SM	1.75	45.04	1.26	12.01	60.05
207b	DEEP PATCHING (16-30 cm)	SM	1.75	39.67	1.26	10.67	53.35
208	REINSTATEMENT OF ROAD SURFACE	SM	1.89	57.10	0.56	14.89	74.44
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.02	110.61	0.68	28.33	141.63
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.40	22.12	0.14	5.67	28.33
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.29	1.57	36.68	9.64	48.18
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.57	40.94	10.70	53.49
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	15.35	4.01	20.06
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.12	0.58	17.91	4.65	23.26
304a	SINGLE SURFACE TREATMENT	SM	0.77	7.57	73.08	20.35	101.77
304b	DOUBLE SURFACE TREATMENT	SM	1.12	14.15	141.84	39.28	196.38
304c	TRIPLE SURFACE TREATMENT	SM	1.88	19.94	161.82	45.91	229.55
304d	SEAL COAT	SM	0.71	4.12	51.58	14.10	70.51

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	69.43	1,489.33	6,958.30	2,129.26	10,646.32
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	69.43	1,438.23	7,504.01	2,252.92	11,264.58
307a	DENSE GRADED HOT BIT-MAC	CM	173.91	379.77	5,748.71	1,575.60	7,877.99
307b	OPEN GRADED HOT BIT-MAC	CM	173.91	379.77	5,600.71	1,538.60	7,692.99
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	30.32	590.65	2,049.70	667.67	3,338.33
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	24.98	650.70	43,713.28	11,097.24	55,486.20
309a	COLD MILLING, 0 - 30 mm	SM	0.96	24.99	8.68	8.66	43.29
309b	COLD MILLING, 0 - 50 mm	SM	1.61	41.65	14.46	14.43	72.15
309c	COLD MILLING, 0 - 70 mm	SM	2.41	62.48	21.69	21.65	108.23
401a1i	CONCRETE CLASS "A1" (Underground)	CM	498.22	1,059.94	3,939.07	1,374.31	6,871.54
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	498.22	1,059.94	4,216.54	1,443.68	7,218.38
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	498.22	1,059.94	4,771.49	1,582.41	7,912.06
401a2i	CONCRETE CLASS "A2" (Underground)	CM	498.22	1,059.94	4,317.07	1,468.81	7,344.04
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	498.22	1,059.94	4,594.54	1,538.18	7,690.88
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	498.22	1,059.94	5,149.49	1,676.91	8,384.56
401a3i	CONCRETE CLASS "A3" (Underground)	CM	498.22	1,059.94	4,695.07	1,563.31	7,816.54
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	498.22	1,059.94	4,972.54	1,632.68	8,163.38
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	498.22	1,059.94	5,527.49	1,771.41	8,857.06
401b	CONCRETE CLASS "B"	CM	665.04	805.93	3,188.21	1,164.80	5,823.98
401ci	CONCRETE CLASS "C" (Underground)	CM	495.38	500.55	3,512.96	1,127.22	5,636.12
401cii	CONCRETE CLASS "C" (On ground)	CM	495.38	500.55	3,631.31	1,156.81	5,784.04
401ciii	CONCRETE CLASS "C" (Elevated)	CM	495.38	500.55	3,867.99	1,215.98	6,079.90
401d	CONCRETE CLASS "D1"	CM	752.89	1,265.57	5,282.35	1,825.20	9,126.01
401e	CONCRETE CLASS "Y"	CM	1,031.17	500.55	4,722.30	1,563.50	7,817.52
401f	LEAN CONCRETE	CM	439.43	507.52	2,460.82	851.94	4,259.70
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,676.01	947.15	4,937.64	1,890.20	9,451.00
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,676.01	947.15	5,693.64	2,079.20	10,396.00
401gii	PRECAST CONCRETE CLASS "B"	CM	1,676.01	947.15	4,716.61	1,834.94	9,174.72
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,676.01	947.15	6,071.64	2,173.70	10,868.50

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,676.01	947.15	6,449.64	2,268.20	11,341.00
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,676.01	947.15	6,827.64	2,362.70	11,813.50
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,439.84	781.47	59,888.00	15,527.33	77,636.64
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,439.84	781.47	67,238.00	17,364.83	86,824.14
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,196.03	5,393.81	55,607.86	15,549.43	77,747.13
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,533.93	15,659.05	133,826.65	38,004.91	190,024.54
405b	LAUNCHING OF GIRDER	TON	58.87	532.52	-	147.85	739.24
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	108.86	-	289.92	99.69	498.47
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	108.86	-	290.12	99.74	498.72
406c	STEEL EXPANSION JOINTS	KG	8.74	26.40	90.61	31.44	157.18
406d	WATER STOPS 6" SIZE	M	94.27	-	470.21	141.12	705.60
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	39.28	-	2,879.84	729.78	3,648.89
406g	STEEL OR METAL BEARING DEVICES	KG	19.87	69.68	116.56	51.53	257.64
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	315.86	1,654.04	710.46	670.09	3,350.46
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	473.79	2,481.06	1,065.70	1,005.14	5,025.69
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	473.79	2,481.06	804.99	939.96	4,699.80
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	789.65	4,135.11	975.62	1,475.09	7,375.47
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	676.84	4,884.94	1,145.30	1,676.77	8,383.85
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,184.48	6,909.78	1,257.53	2,337.95	11,689.74
407h	PILE LOAD TEST UP TO 120 TON	EACH	23,825.17	45,769.30	99,547.10	42,285.39	211,426.97
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,504.47	45,769.30	199,094.20	72,341.99	361,709.97
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,183.77	50,188.38	298,641.30	103,503.36	517,516.82
407k	CONFIRMATORY BORING (NX SIZE)	M	192.63	1,582.02	6.37	445.26	2,226.28
410	BRICK WORK	CM	314.84	282.72	2,810.94	852.13	4,260.63
411a	STONE MASONRY RANDOM DRY	CM	275.64	107.96	620.39	251.00	1,254.99
411b	STONE MASONRY RANDOM WITH MORTAR	CM	294.44	166.68	1,642.90	526.01	2,630.03
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	359.20	107.96	687.11	288.57	1,442.83
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	419.79	166.68	1,721.61	577.02	2,885.10

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	66.28	11.74	43.68	30.43	152.14
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	568.11	264.08	1,626.81	614.75	3,073.75
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	229.80	437.48	643.28	327.64	1,638.20
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	224.30	577.19	834.03	408.88	2,044.39
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	218.99	935.96	1,004.82	539.94	2,699.72
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	230.42	1,146.39	1,555.47	733.07	3,665.35
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	265.34	1,078.41	2,198.54	885.57	4,427.87
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	327.42	1,331.30	3,614.26	1,318.25	6,591.23
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	423.72	1,481.41	4,680.21	1,646.34	8,231.68
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	501.09	1,798.85	5,964.34	2,066.07	10,330.35
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	589.33	2,098.66	9,213.56	2,975.39	14,876.94
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	229.80	507.33	661.52	349.66	1,748.31
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	224.30	577.19	781.04	395.63	1,978.15
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	212.43	935.96	955.67	526.02	2,630.08
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	230.42	1,146.39	1,590.78	741.90	3,709.49
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	265.34	1,078.41	3,023.94	1,091.92	5,459.61
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	327.42	1,331.30	4,440.26	1,524.75	7,623.73
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	423.72	1,481.41	6,202.39	2,026.88	10,134.41
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	501.09	1,798.85	8,410.55	2,677.62	13,388.11
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	589.33	2,098.66	11,829.30	3,629.32	18,146.62
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	90.71	118.93	440.80	162.61	813.05
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	745.45	612.95	3,538.21	1,224.15	6,120.77
507a	STEEL WIRE MESH FOR GABIONS	KG	4.86	-	104.07	27.23	136.16
507b	ROCK FILL IN GABIONS	CM	98.70	-	359.56	114.56	572.82
508a	BRICK PAVING (SINGLE COURSE)	SM	107.01	32.70	220.97	90.17	450.85
508b	BRICK PAVING (DOUBLE COURSE)	SM	190.58	32.70	438.27	165.39	826.93
509a	RIP RAP CLASS "A"	CM	458.71	-	525.59	246.07	1,230.37
509b	RIP RAP CLASS "B"	CM	443.01	-	521.38	241.10	1,205.49
509c	RIP RAP CLASS "C"	CM	445.08	-	525.59	242.67	1,213.34

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	561.48	102.14	1,916.17	644.95	3,224.75
509e	GROUTED RIP RAP CLASS "B"	CM	540.27	81.72	1,767.53	597.38	2,986.89
509f	GROUTED RIP RAP CLASS "C"	CM	533.79	68.10	1,813.21	603.77	3,018.87
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	790.35	353.02	4,103.66	1,311.76	6,558.79
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	49.60	191.97	416.21	164.45	822.23
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	100.76	390.69	-	122.86	614.31
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	146.54	67.48	85.41	74.86	374.28
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	187.57	86.37	109.32	95.81	479.07
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	236.04	180.32	377.79	198.54	992.68
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	295.05	225.40	472.23	248.17	1,240.86
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	264.22	572.25	2,206.55	760.75	3,803.77
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	917.65	670.54	4,052.81	1,410.25	7,051.25
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	133.99	90.27	428.12	163.09	815.46
603	BRICK EDGING	M	8.69	-	34.56	10.81	54.07
604a	METAL GUARD RAIL	M	17.57	70.84	1,579.36	416.94	2,084.71
604b	METAL GUARD RAIL END PIECES	EACH	22.93	-	1,197.58	305.13	1,525.64
604d	STEEL POST OF METAL GUARD RAIL	EACH	80.68	976.73	3,776.31	1,208.43	6,042.14
605a	CONCRETE BEAM GUARD RAIL	M	73.01	30.82	590.42	173.56	867.81
605c	CONCRETE POST FOR GUARD RAIL	M	89.64	27.36	590.37	176.84	884.21
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	230.97	255.15	6,853.78	1,834.98	9,174.88
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	71.54	382.72	9,243.40	2,424.41	12,122.07
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	230.97	541.89	11,862.04	3,158.72	15,793.61
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	767.83	598.64	20,915.21	5,570.42	27,852.10
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	153.57	119.73	9,196.51	2,367.45	11,837.26
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	244.28	-	1,301.88	386.54	1,932.70
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	244.28	-	1,952.82	549.28	2,746.38
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.82	5.86	16.15	6.21	31.03
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.94	4.03	39.52	11.12	55.61
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.82	5.86	21.55	7.56	37.78

District: Shikarpur **District Code: 62**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.94	4.03	52.71	14.42	72.10
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.39	5.22	156.03	55.91	279.54
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.39	9.98	498.02	142.60	712.99
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.52	8.59	22.46	8.64	43.22
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.52	9.63	67.50	20.16	100.82
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.52	6.95	29.95	10.11	50.53
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.52	9.63	90.01	25.79	128.95
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.39	3.73	216.89	70.75	353.75
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.39	7.90	851.20	230.37	1,151.86
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	53.16	3.73	104.02	40.23	201.13
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	53.16	7.90	332.52	98.39	491.96
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	53.16	3.73	144.59	50.37	251.84
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	53.16	7.90	568.32	157.34	786.72
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	9.58	81.62	193.79	71.25	356.24
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	9.58	81.62	233.79	81.25	406.24
610b	RIGHT OF WAY MARKER	EACH	104.84	121.33	299.50	131.42	657.08
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	593.90	976.31	2,009.80	895.00	4,475.01
610d	TEN KILOMETRE POST	EACH	1,143.36	1,952.61	4,417.33	1,878.32	9,391.62
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	129.04	91.00	950.86	292.73	1,463.64

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

SUKKUR
(65)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.76	10.10	-	2.72	13.58
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	7.72	173.32	1.17	45.55	227.76
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	21.97	456.54	2.63	120.29	601.43
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	87.90	1,826.16	10.51	481.14	2,405.71
103	STRIPPING	CM	2.78	93.22	-	24.00	119.99
104	COMPACTION OF NATURAL GROUND	SM	0.39	9.91	0.76	2.76	13.82
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.68	135.76	-	35.11	175.55
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	137.86	316.30	50.82	126.25	631.23
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	20.01	337.99	-	89.50	447.51
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	13.04	262.40	-	68.86	344.30
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.83	120.27	-	31.02	155.12
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	137.86	316.30	50.82	126.25	631.23
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	21.80	316.03	-	84.46	422.28
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	10.22	263.92	-	68.54	342.68
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.22	137.60	0.38	36.55	182.76
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	67.74	287.11	70.80	106.42	532.08
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	121.09	427.01	33.88	145.50	727.49
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	103.03	292.53	-	98.89	494.46
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	62.28	238.86	-	75.29	376.43
107d	GRANULAR BACK FILL	CM	35.15	137.14	381.30	138.40	691.98
107e	COMMON BACK FILL	CM	25.72	62.84	5.09	23.41	117.06
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	7.95	174.71	5.09	46.94	234.68
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	22.68	482.48	54.04	139.80	699.01
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	17.01	416.71	2.42	109.04	545.18
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	15.12	369.34	-	96.12	480.58
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	8.97	177.46	7.94	48.59	242.95
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.20	76.32	5.09	22.15	110.76
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	16.29	110.29	3.03	32.40	162.00
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.56	27.34	1.46	7.59	37.94

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.15	18.21	0.77	5.03	25.16
110	IMPROVED SUB-GRADE	CM	11.53	120.02	55.27	46.71	233.53
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.96	15.26	0.79	4.25	21.27
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.48	15.57	0.90	4.49	22.43
201	GRANULAR SUB-BASE	CM	9.07	255.06	501.89	191.50	957.52
202	AGGREGATE BASE	CM	10.72	326.54	742.78	270.01	1,350.06
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	78.13	1,510.17	5,780.11	1,842.10	9,210.50
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	80.80	1,510.17	6,184.31	1,943.82	9,719.09
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	86.61	1,577.28	5,770.20	1,858.52	9,292.61
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	86.61	1,571.31	6,329.21	1,996.78	9,983.91
204b	CEMENT STABILIZED BASE	CM	32.41	569.10	896.93	374.61	1,873.06
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	251.68	915.38	51,562.35	13,182.35	65,911.76
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	251.68	915.38	49,984.22	12,787.82	63,939.10
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	99.70	112.80	782.22	248.68	1,243.40
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	163.73	2,437.94	5,453.47	2,013.79	10,068.93
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	109.10	126.27	804.56	259.98	1,299.92
207a	DEEP PATCHING (0-15 cm)	SM	2.02	45.04	1.26	12.08	60.39
207b	DEEP PATCHING (16-30 cm)	SM	2.02	39.67	1.26	10.74	53.68
208	REINSTATEMENT OF ROAD SURFACE	SM	2.14	57.10	0.56	14.95	74.75
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.37	110.61	0.68	28.42	142.08
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.47	22.12	0.14	5.68	28.42
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.32	1.57	36.60	9.62	48.11
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.31	1.57	40.85	10.68	53.41
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	15.32	4.01	20.03
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.13	0.58	17.87	4.64	23.22
304a	SINGLE SURFACE TREATMENT	SM	0.83	7.57	72.06	20.12	100.58
304b	DOUBLE SURFACE TREATMENT	SM	1.22	14.15	138.82	38.55	192.73
304c	TRIPLE SURFACE TREATMENT	SM	2.06	19.94	158.31	45.08	225.39
304d	SEAL COAT	SM	0.75	4.12	51.30	14.04	70.21

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	74.22	1,489.33	6,792.06	2,088.90	10,444.52
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	74.22	1,438.23	7,334.67	2,211.78	11,058.91
307a	DENSE GRADED HOT BIT-MAC	CM	189.05	379.77	5,614.49	1,545.83	7,729.13
307b	OPEN GRADED HOT BIT-MAC	CM	189.05	379.77	5,438.01	1,501.71	7,508.54
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	34.95	590.65	2,011.57	659.29	3,296.45
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	26.00	650.70	43,597.84	11,068.63	55,343.17
309a	COLD MILLING, 0 - 30 mm	SM	1.07	24.99	8.68	8.68	43.42
309b	COLD MILLING, 0 - 50 mm	SM	1.78	41.65	14.46	14.47	72.36
309c	COLD MILLING, 0 - 70 mm	SM	2.67	62.48	21.69	21.71	108.55
401a1i	CONCRETE CLASS "A1" (Underground)	CM	597.93	1,059.94	3,826.49	1,371.09	6,855.45
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	597.93	1,059.94	4,103.97	1,440.46	7,202.29
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	597.93	1,059.94	4,658.91	1,579.19	7,895.97
401a2i	CONCRETE CLASS "A2" (Underground)	CM	597.93	1,059.94	4,204.49	1,465.59	7,327.95
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	597.93	1,059.94	4,481.97	1,534.96	7,674.79
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	597.93	1,059.94	5,036.91	1,673.69	8,368.47
401a3i	CONCRETE CLASS "A3" (Underground)	CM	597.93	1,059.94	4,582.49	1,560.09	7,800.45
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	597.93	1,059.94	4,859.97	1,629.46	8,147.29
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	597.93	1,059.94	5,414.91	1,768.19	8,840.97
401b	CONCRETE CLASS "B"	CM	761.79	805.93	3,016.69	1,146.10	5,730.52
401ci	CONCRETE CLASS "C" (Underground)	CM	582.49	500.55	3,340.75	1,105.95	5,529.73
401cii	CONCRETE CLASS "C" (On ground)	CM	582.49	500.55	3,459.09	1,135.53	5,677.66
401ciii	CONCRETE CLASS "C" (Elevated)	CM	582.49	500.55	3,695.78	1,194.70	5,973.51
401d	CONCRETE CLASS "D1"	CM	914.10	1,265.57	5,172.32	1,838.00	9,189.99
401e	CONCRETE CLASS "Y"	CM	1,216.66	500.55	4,634.93	1,588.03	7,940.17
401f	LEAN CONCRETE	CM	485.67	507.52	2,287.47	820.17	4,100.83
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,899.11	947.15	4,820.26	1,916.63	9,583.15
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,899.11	947.15	5,576.26	2,105.63	10,528.15
401gii	PRECAST CONCRETE CLASS "B"	CM	1,899.11	947.15	4,531.48	1,844.43	9,222.17
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,899.11	947.15	5,954.26	2,200.13	11,000.65

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,899.11	947.15	6,332.26	2,294.63	11,473.15
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,899.11	947.15	6,710.26	2,389.13	11,945.65
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,748.68	781.47	59,888.00	15,604.54	78,022.69
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,748.68	781.47	67,238.00	17,442.04	87,210.19
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,432.77	5,393.81	55,665.02	15,622.90	78,114.51
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,785.34	15,659.05	133,772.31	38,054.18	190,270.88
405b	LAUNCHING OF GIRDER	TON	64.84	532.52	-	149.34	746.70
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	126.29	-	301.72	107.00	535.02
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	126.29	-	295.46	105.44	527.19
406c	STEEL EXPANSION JOINTS	KG	9.95	26.40	90.07	31.60	158.02
406d	WATER STOPS 6" SIZE	M	119.88	-	465.21	146.27	731.37
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	42.28	-	2,883.94	731.56	3,657.78
406g	STEEL OR METAL BEARING DEVICES	KG	20.52	69.68	116.17	51.59	257.96
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	350.53	1,654.04	712.02	679.15	3,395.74
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	525.80	2,481.06	1,068.04	1,018.72	5,093.62
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	525.80	2,481.06	807.64	953.62	4,768.12
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	876.33	4,135.11	980.03	1,497.87	7,489.33
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	751.14	4,884.94	1,150.65	1,696.68	8,483.41
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,314.49	6,909.78	1,264.16	2,372.11	11,860.53
407h	PILE LOAD TEST UP TO 120 TON	EACH	24,086.96	45,769.30	97,909.42	41,941.42	209,707.11
407i	PILE LOAD TEST UP TO 240 TON	EACH	44,766.26	45,769.30	195,818.84	71,588.60	357,943.01
407j	PILE LOAD TEST UP TO 360 TON	EACH	65,445.56	50,188.38	293,728.26	102,340.55	511,702.76
407k	CONFIRMATORY BORING (NX SIZE)	M	203.74	1,582.02	6.37	448.03	2,240.16
410	BRICK WORK	CM	337.33	282.72	2,797.33	854.35	4,271.73
411a	STONE MASONRY RANDOM DRY	CM	303.60	107.96	431.14	210.68	1,053.38
411b	STONE MASONRY RANDOM WITH MORTAR	CM	324.66	166.68	1,436.63	482.00	2,409.98
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	391.68	107.96	482.73	245.59	1,227.96
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	456.78	166.68	1,504.47	531.98	2,659.92

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	70.89	11.74	43.40	31.51	157.54
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	611.88	264.08	1,409.67	571.41	2,857.04
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	238.06	437.48	642.74	329.57	1,647.85
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	232.10	577.19	833.39	410.67	2,053.35
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	232.00	935.96	1,004.08	543.01	2,715.05
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	242.24	1,146.39	1,554.60	735.81	3,679.04
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	278.33	1,078.41	2,197.67	888.60	4,443.02
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	343.29	1,331.30	3,613.00	1,321.90	6,609.49
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	444.26	1,481.41	4,678.96	1,651.16	8,255.79
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	524.41	1,798.85	5,962.82	2,071.52	10,357.61
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	614.05	2,098.66	9,211.78	2,981.12	14,905.62
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	238.06	507.33	660.46	351.46	1,757.31
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	232.10	577.19	780.40	397.42	1,987.11
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	222.81	935.96	954.93	528.43	2,642.13
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	242.24	1,146.39	1,590.11	744.69	3,723.43
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	278.33	1,078.41	3,022.97	1,094.93	5,474.65
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	343.29	1,331.30	4,439.00	1,528.40	7,641.99
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	444.26	1,481.41	6,201.14	2,031.70	10,158.51
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	524.41	1,798.85	8,409.03	2,683.07	13,415.37
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	614.05	2,098.66	11,827.53	3,635.06	18,175.31
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	95.02	118.93	378.75	148.18	740.88
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	881.55	612.95	3,366.69	1,215.30	6,076.49
507a	STEEL WIRE MESH FOR GABIONS	KG	5.15	-	104.32	27.37	136.84
507b	ROCK FILL IN GABIONS	CM	102.40	-	335.58	109.49	547.47
508a	BRICK PAVING (SINGLE COURSE)	SM	113.63	32.70	220.04	91.59	457.96
508b	BRICK PAVING (DOUBLE COURSE)	SM	201.71	32.70	436.59	167.75	838.76
509a	RIP RAP CLASS "A"	CM	487.47	-	336.34	205.95	1,029.76
509b	RIP RAP CLASS "B"	CM	469.63	-	333.65	200.82	1,004.09
509c	RIP RAP CLASS "C"	CM	471.78	-	336.34	202.03	1,010.14

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	595.40	102.14	1,716.29	603.46	3,017.28
509e	GROUTED RIP RAP CLASS "B"	CM	572.82	81.72	1,570.26	556.20	2,781.00
509f	GROUTED RIP RAP CLASS "C"	CM	565.43	68.10	1,614.03	561.89	2,809.45
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	890.12	353.02	3,941.24	1,296.10	6,480.48
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	52.52	191.97	381.80	156.57	782.87
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	106.52	390.69	-	124.30	621.52
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	157.97	67.48	54.65	70.02	350.12
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	202.20	86.37	69.96	89.63	448.15
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	254.28	180.32	346.82	195.36	976.78
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	317.85	225.40	433.53	244.19	1,220.97
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	316.86	572.25	2,148.34	759.36	3,796.82
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,041.34	670.54	3,991.77	1,425.91	7,129.56
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	151.39	90.27	414.97	164.15	820.77
603	BRICK EDGING	M	9.38	-	34.56	10.99	54.93
604a	METAL GUARD RAIL	M	18.91	70.84	1,579.36	417.28	2,086.39
604b	METAL GUARD RAIL END PIECES	EACH	24.62	-	1,197.58	305.55	1,527.74
604d	STEEL POST OF METAL GUARD RAIL	EACH	86.95	976.73	3,776.31	1,210.00	6,049.98
605a	CONCRETE BEAM GUARD RAIL	M	77.43	30.82	586.38	173.66	868.30
605c	CONCRETE POST FOR GUARD RAIL	M	95.07	27.36	585.49	176.98	884.90
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	245.38	255.15	6,846.76	1,836.82	9,184.10
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	86.47	382.72	9,228.36	2,424.39	12,121.94
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	245.38	541.89	11,836.60	3,155.97	15,779.83
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	793.14	598.64	20,890.95	5,570.68	27,853.42
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	158.63	119.73	9,208.34	2,371.67	11,858.37
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	262.68	-	1,306.88	392.39	1,961.96
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	262.68	-	1,960.32	555.75	2,778.76
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.23	5.86	16.18	6.32	31.59
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.08	4.03	39.86	11.24	56.20
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.23	5.86	21.59	7.67	38.36

District: Sukkur **District Code: 65**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.08	4.03	53.16	14.57	72.83
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	70.93	5.22	156.37	58.13	290.64
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	70.93	9.98	502.26	145.79	728.96
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.04	8.59	22.50	8.78	43.91
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.04	9.63	67.50	20.29	101.47
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.04	6.95	30.00	10.25	51.24
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	4.04	9.63	90.01	25.92	129.60
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	70.93	3.73	217.22	72.97	364.85
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	70.93	7.90	851.20	232.51	1,162.53
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	60.59	3.73	104.24	42.14	210.70
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	60.59	7.90	335.35	100.96	504.79
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	60.59	3.73	144.82	52.28	261.41
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	60.59	7.90	568.32	159.20	796.01
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	12.38	81.62	193.77	71.94	359.71
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	12.38	81.62	233.77	81.94	409.71
610b	RIGHT OF WAY MARKER	EACH	110.50	121.33	295.24	131.77	658.83
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	626.96	976.31	1,974.36	894.41	4,472.04
610d	TEN KILOMETRE POST	EACH	1,204.14	1,952.61	4,347.61	1,876.09	9,380.45
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	145.68	91.00	943.63	295.08	1,475.39

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

THARPARKAR
(67)

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.68	10.10	-	2.70	13.48
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	6.86	173.32	1.17	45.34	226.68
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	19.65	456.54	2.63	119.70	598.52
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	78.58	1,826.16	10.51	478.81	2,394.07
103	STRIPPING	CM	2.37	93.22	-	23.90	119.48
104	COMPACTION OF NATURAL GROUND	SM	0.34	9.91	0.76	2.75	13.76
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.17	135.76	-	34.98	174.91
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	121.94	316.30	50.82	122.26	611.32
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	17.17	337.99	-	88.79	443.96
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	11.22	262.40	-	68.40	342.01
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	3.41	120.27	-	30.92	154.60
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	121.94	316.30	50.82	122.26	611.32
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	19.40	316.03	-	83.86	419.28
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	8.70	263.92	-	68.16	340.78
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.91	137.60	0.38	36.22	181.11
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	58.15	287.11	70.80	104.02	520.09
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	107.76	427.01	33.88	142.16	710.81
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	91.56	292.53	-	96.02	480.12
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	55.42	238.86	-	73.57	367.85
107d	GRANULAR BACK FILL	CM	32.21	137.14	513.15	170.62	853.12
107e	COMMON BACK FILL	CM	23.54	62.84	5.09	22.87	114.34
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	6.75	174.71	5.09	46.64	233.19
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	19.59	482.48	54.04	139.03	695.14
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	14.69	416.71	2.42	108.46	542.28
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	13.06	369.34	-	95.60	478.00
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	7.69	177.46	7.94	48.27	241.35
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	6.06	76.32	5.09	21.87	109.34
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	13.94	110.29	3.03	31.81	159.07
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.34	27.34	1.46	7.53	37.67

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	0.97	18.21	0.77	4.99	24.94
110	IMPROVED SUB-GRADE	CM	9.77	120.02	55.24	46.26	231.28
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	0.81	15.26	0.79	4.22	21.08
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.22	15.57	0.90	4.42	22.10
201	GRANULAR SUB-BASE	CM	7.82	255.06	683.10	236.49	1,182.47
202	AGGREGATE BASE	CM	9.31	326.54	898.87	308.68	1,543.40
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	69.69	1,510.17	6,140.85	1,930.18	9,650.88
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	72.16	1,510.17	6,531.05	2,028.34	10,141.72
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	77.13	1,577.28	6,131.84	1,946.56	9,732.82
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	77.13	1,571.31	6,673.71	2,080.54	10,402.69
204b	CEMENT STABILIZED BASE	CM	28.31	569.10	1,313.87	477.82	2,389.11
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	226.06	915.38	51,004.83	13,036.57	65,182.83
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	226.06	915.38	49,426.70	12,642.03	63,210.17
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	89.69	112.80	1,176.44	344.73	1,723.65
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	143.53	2,437.94	5,872.74	2,113.55	10,567.77
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	99.08	126.27	869.14	273.62	1,368.12
207a	DEEP PATCHING (0-15 cm)	SM	1.69	45.04	1.26	11.99	59.97
207b	DEEP PATCHING (16-30 cm)	SM	1.69	39.67	1.26	10.65	53.27
208	REINSTATEMENT OF ROAD SURFACE	SM	1.83	57.10	0.56	14.87	74.37
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	1.96	110.61	0.68	28.31	141.57
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.39	22.12	0.14	5.66	28.31
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.28	1.57	36.20	9.51	47.57
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.27	1.57	40.41	10.56	52.82
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.58	15.15	3.96	19.80
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.11	0.58	17.67	4.59	22.96
304a	SINGLE SURFACE TREATMENT	SM	0.74	7.57	73.20	20.38	101.90
304b	DOUBLE SURFACE TREATMENT	SM	1.09	14.15	143.09	39.58	197.91
304c	TRIPLE SURFACE TREATMENT	SM	1.83	19.94	163.38	46.29	231.44
304d	SEAL COAT	SM	0.69	4.12	51.51	14.08	70.41

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	65.84	1,489.33	7,139.44	2,173.65	10,868.26
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	65.84	1,438.23	7,690.55	2,298.66	11,493.29
307a	DENSE GRADED HOT BIT-MAC	CM	164.08	379.77	5,913.51	1,614.34	8,071.71
307b	OPEN GRADED HOT BIT-MAC	CM	164.08	379.77	5,761.43	1,576.32	7,881.61
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	28.68	590.65	2,073.46	673.19	3,365.97
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	23.75	650.70	43,023.76	10,924.55	54,622.76
309a	COLD MILLING, 0 - 30 mm	SM	0.93	24.99	8.68	8.65	43.25
309b	COLD MILLING, 0 - 50 mm	SM	1.55	41.65	14.46	14.42	72.08
309c	COLD MILLING, 0 - 70 mm	SM	2.33	62.48	21.69	21.62	108.12
401a1i	CONCRETE CLASS "A1" (Underground)	CM	480.66	1,059.94	4,185.34	1,431.48	7,157.42
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	480.66	1,059.94	4,462.81	1,500.85	7,504.26
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	480.66	1,059.94	5,017.75	1,639.59	8,197.94
401a2i	CONCRETE CLASS "A2" (Underground)	CM	480.66	1,059.94	4,563.34	1,525.98	7,629.92
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	480.66	1,059.94	4,840.81	1,595.35	7,976.76
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	480.66	1,059.94	5,395.75	1,734.09	8,670.44
401a3i	CONCRETE CLASS "A3" (Underground)	CM	480.66	1,059.94	4,941.34	1,620.48	8,102.42
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	480.66	1,059.94	5,218.81	1,689.85	8,449.26
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	480.66	1,059.94	5,773.75	1,828.59	9,142.94
401b	CONCRETE CLASS "B"	CM	632.46	805.93	3,432.14	1,217.63	6,088.16
401ci	CONCRETE CLASS "C" (Underground)	CM	469.83	500.55	3,792.27	1,190.66	5,953.30
401cii	CONCRETE CLASS "C" (On ground)	CM	469.83	500.55	3,910.61	1,220.25	6,101.23
401ciii	CONCRETE CLASS "C" (Elevated)	CM	469.83	500.55	4,147.29	1,279.42	6,397.08
401d	CONCRETE CLASS "D1"	CM	732.65	1,265.57	5,506.50	1,876.18	9,380.90
401e	CONCRETE CLASS "Y"	CM	1,000.88	500.55	4,950.89	1,613.08	8,065.40
401f	LEAN CONCRETE	CM	409.60	507.52	2,702.84	904.99	4,524.95
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	1,573.95	947.15	5,207.37	1,932.12	9,660.60
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	1,573.95	947.15	5,963.37	2,121.12	10,605.60
401gii	PRECAST CONCRETE CLASS "B"	CM	1,573.95	947.15	4,979.69	1,875.20	9,376.00
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	1,573.95	947.15	6,341.37	2,215.62	11,078.10

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	1,573.95	947.15	6,719.37	2,310.12	11,550.60
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	1,573.95	947.15	7,097.37	2,404.62	12,023.10
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,419.45	781.47	59,888.00	15,522.23	77,611.16
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,419.45	781.47	67,238.00	17,359.73	86,798.66
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,192.03	5,393.81	55,638.13	15,555.99	77,779.97
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	2,344.37	15,659.05	133,770.73	37,943.54	189,717.68
405b	LAUNCHING OF GIRDER	TON	53.88	532.52	-	146.60	733.00
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	105.74	-	299.42	101.29	506.45
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	105.74	-	293.29	99.76	498.79
406c	STEEL EXPANSION JOINTS	KG	8.68	26.40	90.12	31.30	156.49
406d	WATER STOPS 6" SIZE	M	91.04	-	465.01	139.01	695.06
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.53	2.67
406f	ASPHALT FELT (3 PLY)	SM	35.55	-	2,865.59	725.28	3,626.42
406g	STEEL OR METAL BEARING DEVICES	KG	19.49	69.68	116.19	51.34	256.70
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	287.19	1,654.04	995.67	734.23	3,671.14
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	430.79	2,481.06	1,493.51	1,101.34	5,506.70
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	430.79	2,481.06	1,095.81	1,001.91	5,009.57
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	717.98	4,135.11	1,277.30	1,532.60	7,662.99
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	615.41	4,884.94	1,464.50	1,741.21	8,706.06
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,076.97	6,909.78	1,607.12	2,398.47	11,992.33
407h	PILE LOAD TEST UP TO 120 TON	EACH	22,092.90	45,769.30	103,405.02	42,816.81	214,084.03
407i	PILE LOAD TEST UP TO 240 TON	EACH	41,053.52	45,769.30	206,810.04	73,408.22	367,041.08
407j	PILE LOAD TEST UP TO 360 TON	EACH	60,014.14	50,188.38	310,215.06	105,104.40	525,521.98
407k	CONFIRMATORY BORING (NX SIZE)	M	174.94	1,582.02	6.37	440.83	2,204.16
410	BRICK WORK	CM	280.43	282.72	2,807.73	842.72	4,213.60
411a	STONE MASONRY RANDOM DRY	CM	249.44	107.96	635.91	248.33	1,241.63
411b	STONE MASONRY RANDOM WITH MORTAR	CM	265.47	166.68	1,716.89	537.26	2,686.30
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	323.63	107.96	703.86	283.86	1,419.31
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	376.75	166.68	1,782.23	581.41	2,907.07

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	58.42	11.74	44.66	28.71	143.53
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	509.10	264.08	1,687.42	615.15	3,075.76
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	211.71	437.48	645.10	323.57	1,617.86
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	206.28	577.19	836.22	404.92	2,024.61
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	203.23	935.96	1,007.38	536.64	2,683.21
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	213.48	1,146.39	1,558.46	729.58	3,647.91
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	246.66	1,078.41	2,201.53	881.65	4,408.26
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	304.88	1,331.30	3,618.58	1,313.69	6,568.45
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	394.55	1,481.41	4,684.51	1,640.12	8,200.59
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	467.65	1,798.85	5,969.56	2,059.02	10,295.08
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	548.92	2,098.66	9,219.65	2,966.81	14,834.03
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	211.71	507.33	665.17	346.05	1,730.27
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	206.28	577.19	783.23	391.68	1,958.38
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	197.21	935.96	958.23	522.85	2,614.25
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	213.48	1,146.39	1,593.11	738.24	3,691.22
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	246.66	1,078.41	3,027.26	1,088.08	5,440.42
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	304.88	1,331.30	4,444.58	1,520.19	7,600.95
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	394.55	1,481.41	6,206.69	2,020.66	10,103.32
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	467.65	1,798.85	8,415.77	2,670.57	13,352.84
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	548.92	2,098.66	11,835.40	3,620.74	18,103.72
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	84.91	118.93	522.37	181.55	907.76
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	714.72	612.95	3,782.14	1,277.45	6,387.25
507a	STEEL WIRE MESH FOR GABIONS	KG	4.74	-	104.81	27.39	136.94
507b	ROCK FILL IN GABIONS	CM	91.73	-	492.14	145.97	729.83
508a	BRICK PAVING (SINGLE COURSE)	SM	96.38	32.70	217.51	86.65	433.23
508b	BRICK PAVING (DOUBLE COURSE)	SM	170.57	32.70	430.91	158.54	792.72
509a	RIP RAP CLASS "A"	CM	410.92	-	541.10	238.01	1,190.03
509b	RIP RAP CLASS "B"	CM	396.52	-	536.77	233.32	1,166.61
509c	RIP RAP CLASS "C"	CM	397.60	-	541.10	234.67	1,173.37

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	503.36	102.14	1,968.23	643.44	3,217.18
509e	GROUTED RIP RAP CLASS "B"	CM	483.29	81.72	1,815.66	595.17	2,975.84
509f	GROUTED RIP RAP CLASS "C"	CM	476.93	68.10	1,862.83	601.97	3,009.83
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	723.64	353.02	4,334.34	1,352.75	6,763.75
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	46.29	191.97	513.42	187.92	939.60
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	91.02	390.69	-	120.43	602.14
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	132.67	67.48	87.93	72.02	360.09
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	169.82	86.37	112.55	92.18	460.92
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	212.31	180.32	389.31	195.49	977.43
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	265.39	225.40	486.63	244.36	1,221.78
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	254.93	572.25	2,335.10	790.57	3,952.85
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	862.26	670.54	4,193.07	1,431.47	7,157.33
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	125.55	90.27	453.73	167.39	836.95
603	BRICK EDGING	M	7.96	-	33.60	10.39	51.95
604a	METAL GUARD RAIL	M	16.28	70.84	1,579.36	416.62	2,083.11
604b	METAL GUARD RAIL END PIECES	EACH	20.51	-	1,197.58	304.52	1,522.60
604d	STEEL POST OF METAL GUARD RAIL	EACH	75.59	976.73	3,776.31	1,207.16	6,035.79
605a	CONCRETE BEAM GUARD RAIL	M	67.74	30.82	600.13	174.67	873.37
605c	CONCRETE POST FOR GUARD RAIL	M	83.18	27.36	602.21	178.19	890.93
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	217.12	255.15	6,885.62	1,839.47	9,197.36
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	65.00	382.72	9,302.83	2,437.64	12,188.20
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	217.12	541.89	11,960.26	3,179.82	15,899.08
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	715.88	598.64	21,074.49	5,597.25	27,986.26
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	143.18	119.73	9,242.70	2,376.40	11,882.01
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	241.22	-	1,306.18	386.85	1,934.24
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	241.22	-	1,959.27	550.12	2,750.61
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	2.65	5.86	16.18	6.17	30.86
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	0.88	4.03	39.82	11.18	55.91
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	2.65	5.86	21.59	7.52	37.62

District: Tharparkar **District Code: 67**

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	0.88	4.03	53.10	14.50	72.52
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.57	5.22	156.32	56.03	280.13
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.57	9.98	501.73	143.57	717.85
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.32	8.59	22.49	8.60	43.00
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	3.32	9.63	67.50	20.11	100.56
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.32	6.95	29.99	10.06	50.32
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	3.32	9.63	90.01	25.74	128.69
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	62.57	3.73	217.18	70.87	354.34
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	62.57	7.90	851.20	230.42	1,152.08
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	52.95	3.73	104.21	40.22	201.11
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	52.95	7.90	334.99	98.96	494.80
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	52.95	3.73	144.79	50.37	251.83
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	52.95	7.90	568.32	157.29	786.46
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	8.79	81.62	193.87	71.07	355.35
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	8.79	81.62	233.87	81.07	405.35
610b	RIGHT OF WAY MARKER	EACH	96.92	121.33	309.79	132.01	660.04
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	556.82	976.31	2,094.56	906.92	4,534.61
610d	TEN KILOMETRE POST	EACH	1,081.58	1,952.61	4,585.22	1,904.85	9,524.27
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	119.26	91.00	976.53	296.70	1,483.48

NATIONAL HIGHWAY AUTHORITY

COMPOSITE SCHEDULE OF RATES
January - 2009

THATTA
(68)

SHABIR ASSOCIATES
Quantity Surveying & Construction Cost Consultants

District: Thatta

District Code: 68

CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
101	CLEARING AND GRUBBING	SM	0.92	10.10	-	2.75	13.77
102a	REMOVAL OF TREES 150 - 300 mm GIRTH	EACH	9.02	173.32	1.17	45.88	229.38
102b	REMOVAL OF TREES 301 - 600 mm GIRTH	EACH	26.16	456.54	2.63	121.33	606.66
102c	REMOVAL OF TREES 601 mm OR OVER GIRTH	EACH	104.63	1,826.16	10.51	485.33	2,426.63
103	STRIPPING	CM	3.01	93.22	-	24.06	120.29
104	COMPACTION OF NATURAL GROUND	SM	0.42	9.91	0.76	2.77	13.87
106a	EXCAVATE UNSUITABLE COMMON MATERIAL	CM	4.99	135.76	-	35.19	175.93
106bi	EXCAVATE UNSUITABLE HARD ROCK MATERIAL	CM	153.89	316.30	50.82	130.25	651.26
106bii	EXCAVATE UNSUITABLE MEDIUM ROCK MATERIAL	CM	22.11	337.99	-	90.03	450.13
106biii	EXCAVATE UNSUITABLE SOFT ROCK MATERIAL	CM	14.30	262.40	-	69.17	345.87
106c	EXCAVATE SURPLUS COMMON MATERIAL	CM	4.08	120.27	-	31.09	155.44
106di	EXCAVATE SURPLUS HARD ROCK MATERIAL	CM	153.89	316.30	50.82	130.25	651.26
106dii	EXCAVATE SURPLUS MEDIUM ROCK MATERIAL	CM	24.48	316.03	-	85.13	425.63
106diii	EXCAVATE SURPLUS SOFT ROCK MATERIAL	CM	11.15	263.92	-	68.77	343.85
107a	STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	8.36	137.60	0.38	36.59	182.93
107b	STRUCTURAL EXCAVATION IN COMMON MATERIAL BELOW WATER LEVEL	CM	74.66	287.11	70.80	108.15	540.73
107ci	STRUCTURAL EXCAVATION IN HARD ROCK MATERIAL	CM	135.98	427.01	33.88	149.22	746.09
107cii	STRUCTURAL EXCAVATION IN MEDIUM ROCK MATERIAL	CM	116.10	292.53	-	102.16	510.79
107ciii	STRUCTURAL EXCAVATION IN SOFT ROCK MATERIAL	CM	69.93	238.86	-	77.20	385.99
107d	GRANULAR BACK FILL	CM	41.90	137.14	399.72	144.69	723.45
107e	COMMON BACK FILL	CM	31.69	62.84	5.09	24.90	124.52
108a	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN COMMON MATERIAL	CM	8.50	174.71	5.09	47.07	235.37
108bi	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN HARD ROCK MATERIAL	CM	25.07	482.48	54.04	140.40	701.99
108bii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN MEDIUM ROCK MATERIAL	CM	18.80	416.71	2.42	109.48	547.41
108biii	FORMATION OF EMBANKMENT FROM ROADWAY EXCAVATION IN SOFT ROCK MATERIAL	CM	16.71	369.34	-	96.51	482.57
108c	FORMATION OF EMBANKMENT FROM BORROW EXCAVATION IN COMMON MATERIAL	CM	9.80	177.46	7.94	48.80	244.00
108d	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN COMMON MATERIAL	CM	7.64	76.32	5.09	22.26	111.31
108e	FORMATION OF EMBANKMENT FROM STRUCTURAL EXCAVATION IN ANY TYPE OF ROCK MATERIAL	CM	17.90	110.29	3.03	32.80	164.02
109a	SUB GRADE PREPARATION IN EARTH CUT	SM	1.69	27.34	1.46	7.62	38.11

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
109bi	SUB GRADE PREPARATION IN EXISTING ROAD WITHOUT ANY FILL	SM	1.20	18.21	0.77	5.05	25.23
110	IMPROVED SUB-GRADE	CM	12.54	120.02	67.07	49.91	249.54
114a	DRESSING OF BERM WITHOUT EXTRA MATERIAL	SM	1.03	15.26	0.79	4.27	21.35
114b	DRESSING OF BERM WITH EXTRA BORROW MATERIAL	SM	1.54	15.57	0.90	4.50	22.50
201	GRANULAR SUB-BASE	CM	9.96	255.06	401.94	166.74	833.69
202	AGGREGATE BASE	CM	11.90	326.54	799.71	284.54	1,422.68
203a	ASPHALTIC BASE COURSE PLANT MIX (CLASS "A")	CM	93.27	1,510.17	5,792.13	1,848.89	9,244.45
203b	ASPHALTIC BASE COURSE PLANT MIX (CLASS "B")	CM	96.34	1,510.17	6,189.40	1,948.98	9,744.89
203c	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "A")	CM	102.54	1,577.28	5,782.58	1,865.60	9,328.00
203d	ASPHALTIC LEVELLING COURSE PLANT MIX (CLASS "B")	CM	102.54	1,571.31	6,332.17	2,001.50	10,007.52
204b	CEMENT STABILIZED BASE	CM	36.55	569.10	992.86	399.63	1,998.15
204d	LIQUID ASPHALT FOR CURING SEAL, TYPE MC-250	TON	280.96	915.38	50,538.21	12,933.64	64,668.18
204e	EMULSIFIED ASPHALT FOR CURING SEAL, TYPE SS-1	TON	280.96	915.38	48,960.08	12,539.10	62,695.52
205a	GRADED CRUSHED AGGREGATE CRACK-RELIEF LAYER	CM	122.15	112.80	897.86	283.20	1,416.01
205b	ASPHALTIC OPEN-GRADED PLANT MIX CRACK-RELIEF LAYER	CM	188.57	2,437.94	5,512.04	2,034.64	10,173.20
206b	WATER BOUND MACADAM BASE WITH COARSE AGGREGATE CLASS B	CM	135.70	126.27	708.87	242.71	1,213.55
207a	DEEP PATCHING (0-15 cm)	SM	2.12	45.04	1.26	12.10	60.51
207b	DEEP PATCHING (16-30 cm)	SM	2.12	39.67	1.26	10.76	53.81
208	REINSTATEMENT OF ROAD SURFACE	SM	2.35	57.10	0.56	15.00	75.01
209a	BREAKING OF EXISTING ROAD PAVEMENT STRUCTURE	CM	2.31	110.61	0.68	28.40	142.00
209b	SCARIFICATION OF EXISTING ROAD PAVEMENT	SM	0.46	22.12	0.14	5.68	28.40
302a	CUT-BACK ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.36	1.57	35.87	9.45	47.25
302b	EMULSIFIED ASPHALT FOR BITUMINOUS PRIME COAT	SM	0.35	1.57	40.04	10.49	52.45
303a	CUT-BACK ASPHALT FOR BITUMINOUS TACK COAT	SM	0.14	0.58	15.01	3.93	19.67
303b	EMULSIFIED ASPHALT FOR BITUMINOUS TACK COAT	SM	0.14	0.58	17.51	4.56	22.80
304a	SINGLE SURFACE TREATMENT	SM	0.94	7.57	71.08	19.90	99.49
304b	DOUBLE SURFACE TREATMENT	SM	1.37	14.15	137.55	38.27	191.34
304c	TRIPLE SURFACE TREATMENT	SM	2.30	19.94	156.90	44.79	223.93
304d	SEAL COAT	SM	0.87	4.12	50.41	13.85	69.25

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
305a	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "A")	CM	87.30	1,489.33	6,779.65	2,089.07	10,445.34
305b	ASPHALTIC CONCRETE FOR WEARING COURSE (CLASS "B")	CM	87.30	1,438.23	7,311.48	2,209.25	11,046.25
307a	DENSE GRADED HOT BIT-MAC	CM	220.72	379.77	5,587.17	1,546.91	7,734.57
307b	OPEN GRADED HOT BIT-MAC	CM	220.72	379.77	5,431.87	1,508.09	7,540.45
308a	RECYCLING OF ASPHALT CONCRETE (0 - 60 mm THICK)	CM	38.34	590.65	2,009.28	659.57	3,297.83
308b	BITUMEN BINDER GRADE (40 - 50, 60 - 70, 80 - 100)	TON	30.28	650.70	42,543.28	10,806.06	54,030.32
309a	COLD MILLING, 0 - 30 mm	SM	1.19	24.99	8.68	8.72	43.58
309b	COLD MILLING, 0 - 50 mm	SM	1.99	41.65	14.46	14.53	72.63
309c	COLD MILLING, 0 - 70 mm	SM	2.98	62.48	21.69	21.79	108.94
401a1i	CONCRETE CLASS "A1" (Underground)	CM	633.18	1,059.94	3,883.76	1,394.22	6,971.10
401a1ii	CONCRETE CLASS "A1" (On ground)	CM	633.18	1,059.94	4,161.23	1,463.59	7,317.94
401a1iii	CONCRETE CLASS "A1" (Elevated)	CM	633.18	1,059.94	4,716.18	1,602.32	8,011.62
401a2i	CONCRETE CLASS "A2" (Underground)	CM	633.18	1,059.94	4,261.76	1,488.72	7,443.60
401a2ii	CONCRETE CLASS "A2" (On ground)	CM	633.18	1,059.94	4,539.23	1,558.09	7,790.44
401a2iii	CONCRETE CLASS "A2" (Elevated)	CM	633.18	1,059.94	5,094.18	1,696.82	8,484.12
401a3i	CONCRETE CLASS "A3" (Underground)	CM	633.18	1,059.94	4,639.76	1,583.22	7,916.10
401a3ii	CONCRETE CLASS "A3" (On ground)	CM	633.18	1,059.94	4,917.23	1,652.59	8,262.94
401a3iii	CONCRETE CLASS "A3" (Elevated)	CM	633.18	1,059.94	5,472.18	1,791.32	8,956.62
401b	CONCRETE CLASS "B"	CM	827.62	805.93	3,105.85	1,184.85	5,924.24
401ci	CONCRETE CLASS "C" (Underground)	CM	625.01	500.55	3,433.17	1,139.68	5,698.40
401cii	CONCRETE CLASS "C" (On ground)	CM	625.01	500.55	3,551.51	1,169.27	5,846.33
401ciii	CONCRETE CLASS "C" (Elevated)	CM	625.01	500.55	3,788.19	1,228.44	6,142.18
401d	CONCRETE CLASS "D1"	CM	972.34	1,265.57	5,228.64	1,866.64	9,333.19
401e	CONCRETE CLASS "Y"	CM	1,334.24	500.55	4,679.73	1,628.63	8,143.15
401f	LEAN CONCRETE	CM	549.85	507.52	2,378.54	858.98	4,294.89
401gi(1)	PRECAST CONCRETE CLASS "A-1"	CM	2,115.38	947.15	4,879.16	1,985.42	9,927.12
401gi(3)	PRECAST CONCRETE CLASS "A-3"	CM	2,115.38	947.15	5,635.16	2,174.42	10,872.12
401gii	PRECAST CONCRETE CLASS "B"	CM	2,115.38	947.15	4,627.54	1,922.52	9,612.59
401giii(1)	PRECAST CONCRETE CLASS "D1"	CM	2,115.38	947.15	6,013.16	2,268.92	11,344.62

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
401giii(2)	PRECAST CONCRETE CLASS "D2"	CM	2,115.38	947.15	6,391.16	2,363.42	11,817.12
401giii(3)	PRECAST CONCRETE CLASS "D3"	CM	2,115.38	947.15	6,769.16	2,457.92	12,289.62
404a	REINFORCEMENT AS PER AASHTO M. 31 GRADE 40	TON	1,866.79	781.47	59,358.00	15,501.57	77,507.83
404b	REINFORCEMENT AS PER AASHTO M. 31 GRADE 60	TON	1,866.79	781.47	66,708.00	17,339.07	86,695.33
404h	REINFORCEMENT (STRUCTURAL SHAPES) AS PER ASTM-A-36	TON	1,608.12	5,393.81	55,070.43	15,518.09	77,590.45
405a	PRE-STRESSING WIRE STRAND 3/8" - 1/2" DIA COMPLETE IN ALL RESPECT	TON	3,311.54	15,659.05	133,714.81	38,171.35	190,856.75
405b	LAUNCHING OF GIRDER	TON	77.39	532.52	-	152.48	762.39
406a	PREMOULDED JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	141.56	-	290.51	108.02	540.08
406b	NEOPRENE RUBBER JOINT FILLER 12 mm THICK WITH BITUMASTIC JOINT SEAL	SM	141.56	-	285.06	106.65	533.27
406c	STEEL EXPANSION JOINTS	KG	11.86	26.40	89.53	31.94	159.72
406d	WATER STOPS 6" SIZE	M	121.69	-	463.94	146.41	732.04
406e	ELASTOMERIC BEARING PADS (ACCORDING TO SIZE AND THICKNESS)	ccm	0.02	-	2.12	0.54	2.68
406f	ASPHALT FELT (3 PLY)	SM	46.92	-	2,858.49	726.35	3,631.77
406g	STEEL OR METAL BEARING DEVICES	KG	26.56	69.68	115.63	52.97	264.84
407d1	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN NORMAL SOIL	M	414.96	1,654.04	851.41	730.10	3,650.51
407d2	CAST IN PLACE CONCRETE PILES UP TO 0.76 M DIA (BORING ONLY) IN GRAVEL STRATA	M	622.44	2,481.06	1,277.11	1,095.15	5,475.77
407d3	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN NORMAL SOIL	M	622.44	2,481.06	970.70	1,018.55	5,092.75
407d4	CAST IN PLACE CONCRETE PILES 0.80 - 1.4 M DIA (BORING ONLY) IN GRAVEL STRATA	M	1,037.40	4,135.11	1,190.79	1,590.83	7,954.13
407d5	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN NORMAL SOIL	M	889.20	4,884.94	1,448.45	1,805.65	9,028.24
407d6	CAST IN PLACE CONCRETE PILES 1.5 -2.0 M DIA (BORING ONLY) IN GRAVEL SOIL	M	1,556.10	6,909.78	1,545.98	2,502.97	12,514.83
407h	PILE LOAD TEST UP TO 120 TON	EACH	30,259.09	45,769.30	93,112.54	42,285.23	211,426.17
407i	PILE LOAD TEST UP TO 240 TON	EACH	56,691.83	45,769.30	186,225.08	72,171.55	360,857.77
407j	PILE LOAD TEST UP TO 360 TON	EACH	83,124.57	50,188.38	279,337.62	103,162.64	515,813.22
407k	CONFIRMATORY BORING (NX SIZE)	M	251.23	1,582.02	6.37	459.90	2,299.52
410	BRICK WORK	CM	375.02	282.72	2,745.34	850.77	4,253.85
411a	STONE MASONRY RANDOM DRY	CM	330.23	107.96	428.19	216.60	1,082.99
411b	STONE MASONRY RANDOM WITH MORTAR	CM	351.24	166.68	1,431.20	487.28	2,436.40
411c	STONE MASONRY DRESSED UNCOURSED DRY	CM	430.99	107.96	479.53	254.62	1,273.09
411d	STONE MASONRY DRESSED UNCOURSED WITH MORTAR	CM	502.37	166.68	1,499.41	542.12	2,710.58

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
411g	ROLL POINTING	SM	78.51	11.74	43.36	33.40	167.02
412a	STONE MASONRY DRESSED COURSED WITH MORTAR	CM	682.86	264.08	1,404.60	587.89	2,939.44
501a	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 310 mm	M	286.00	437.48	642.67	341.54	1,707.69
501b	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 380 mm	M	279.72	577.19	833.30	422.55	2,112.75
501c	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 460 mm	M	271.43	935.96	1,003.97	552.84	2,764.20
501d	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 610 mm	M	286.80	1,146.39	1,554.47	746.92	3,734.59
501e	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 760 mm	M	331.05	1,078.41	2,197.54	901.75	4,508.76
501f	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 910 mm	M	408.40	1,331.30	3,612.82	1,338.13	6,690.64
501g	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1070 mm	M	528.51	1,481.41	4,678.78	1,672.18	8,360.88
501h	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1220 mm	M	626.76	1,798.85	5,962.60	2,097.05	10,485.26
501i	R.C.C PIPE CULVERT AASHTO M 170 CLASS II DIA 1520 mm	M	734.74	2,098.66	9,211.52	3,011.23	15,056.16
501j	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 310 mm	M	286.00	507.33	660.30	363.41	1,817.04
501k	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 380 mm	M	279.72	577.19	780.31	409.30	2,046.51
501l	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 460 mm	M	263.04	935.96	954.82	538.46	2,692.28
501m	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 610 mm	M	286.80	1,146.39	1,590.01	755.80	3,779.00
501n	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 760 mm	M	331.05	1,078.41	3,022.83	1,108.07	5,540.36
501o	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 910 mm	M	408.40	1,331.30	4,438.82	1,544.63	7,723.14
501p	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1070 mm	M	528.51	1,481.41	6,200.96	2,052.72	10,263.60
501q	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1220 mm	M	626.76	1,798.85	8,408.81	2,708.60	13,543.02
501r	R.C.C PIPE CULVERT AASHTO M 170 CLASS IV DIA 1520 mm	M	734.74	2,098.66	11,827.27	3,665.17	18,325.85
502a	GRANULAR MATERIAL IN BED TO CONCRETE PIPE CULVERT	CM	112.32	118.93	366.21	149.37	746.83
502b	CONCRETE CLASS "B" IN BEDDING AND ENCASEMENT OF CONCRETE PIPE CULVERT	CM	940.19	612.95	3,455.85	1,252.25	6,261.23
507a	STEEL WIRE MESH FOR GABIONS	KG	6.18	-	104.11	27.57	137.86
507b	ROCK FILL IN GABIONS	CM	123.52	-	331.63	113.79	568.94
508a	BRICK PAVING (SINGLE COURSE)	SM	129.64	32.70	211.66	93.50	467.51
508b	BRICK PAVING (DOUBLE COURSE)	SM	230.40	32.70	420.39	170.87	854.35
509a	RIP RAP CLASS "A"	CM	551.84	-	333.39	221.31	1,106.54
509b	RIP RAP CLASS "B"	CM	533.82	-	330.72	216.14	1,080.68
509c	RIP RAP CLASS "C"	CM	535.81	-	333.39	217.30	1,086.50

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
509d	GROUTED RIP RAP CLASS "A"	CM	676.93	102.14	2,694.88	868.49	4,342.44
509e	GROUTED RIP RAP CLASS "B"	CM	650.70	81.72	2,450.06	795.62	3,978.08
509f	GROUTED RIP RAP CLASS "C"	CM	643.00	68.10	2,396.11	776.80	3,884.01
509g	REINFORCED CONCRETE SLOPE PROTECTION (WITHOUT REINFORCEMENT)	CM	975.87	353.02	4,025.79	1,338.67	6,693.35
509h	FILTER LAYER OF GRANULAR MATERIAL	CM	62.22	191.97	399.69	163.47	817.36
510	DISMANTLING OF STRUCTURE AND OBSTRUCTIONS	CM	129.17	390.69	-	129.97	649.83
511a1	DRY STONE PITCHING (15-20 cm Thick)	SM	176.63	67.48	54.18	74.57	372.86
511a2	DRY STONE PITCHING (21-25 cm Thick)	SM	226.09	86.37	69.34	95.45	477.26
511b1	GROUTED STONE PITCHING (15-20 cm Thick)	SM	283.20	180.32	340.97	201.12	1,005.62
511b2	GROUTED STONE PITCHING (21-25 cm Thick)	SM	354.00	225.40	426.22	251.40	1,257.02
601ai	CONCRETE KERB IN PLACE NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	335.85	572.25	2,177.77	771.47	3,857.33
601di	PRECAST REINFORCED CONCRETE KERB NEW JERSY BARRIER FOR MEDIAN (DOUBLE FACE)	M	1,157.94	670.54	4,011.37	1,459.96	7,299.80
601dii	PRECAST KERB IN CONCRETE CLASS A-1 OF SIZE 450 X 150 MM INCLUDING CONCRETE BEDDING & HAUNCHING	M	168.45	90.27	421.44	170.04	850.20
603	BRICK EDGING	M	10.56	-	33.60	11.04	55.20
604a	METAL GUARD RAIL	M	22.38	70.84	1,579.36	418.15	2,090.73
604b	METAL GUARD RAIL END PIECES	EACH	29.62	-	1,197.58	306.80	1,533.99
604d	STEEL POST OF METAL GUARD RAIL	EACH	100.98	976.73	3,776.31	1,213.51	6,067.53
605a	CONCRETE BEAM GUARD RAIL	M	92.15	30.82	586.07	177.26	886.30
605c	CONCRETE POST FOR GUARD RAIL	M	113.14	27.36	585.37	181.47	907.35
607a	TRAFFIC ROAD SIGN CATEGORY 1	EACH	290.30	255.15	6,846.72	1,848.04	9,240.20
607b	TRAFFIC ROAD SIGN CATEGORY 2	EACH	86.42	382.72	9,229.38	2,424.63	12,123.15
607c	TRAFFIC ROAD SIGN CATEGORY 3 (a)	EACH	290.30	541.89	11,838.06	3,167.56	15,837.81
607d	TRAFFIC ROAD SIGN CATEGORY 3 (b)	EACH	976.74	598.64	20,882.01	5,614.35	28,071.75
607e	TRAFFIC ROAD SIGN CATEGORY 3 (c)	SM	195.35	119.73	9,191.84	2,376.73	11,883.64
607f	ADDITIONAL PANEL SIZE 60 X 30 cm	EACH	304.11	-	1,302.68	401.70	2,008.49
607g	ADDITIONAL PANEL SIZE 90 X 30 cm	EACH	304.11	-	1,954.03	564.53	2,822.67
608b1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	3.43	5.86	16.16	6.36	31.80
608b2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	1.14	4.03	39.61	11.20	55.98
608c1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	3.43	5.86	21.56	7.71	38.56

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CODE	DESCRIPTION	UNIT	MANPOWER	EQUIPMENT	MATERIAL	OH-PROFIT	RATE
608c2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	1.14	4.03	52.83	14.50	72.50
608d1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	82.44	5.22	156.12	60.94	304.72
608d2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	82.44	9.98	499.15	147.89	739.47
608h1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 15 cm WIDTH	M	4.28	8.59	22.47	8.84	44.18
608h2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 15 cm WIDTH	M	4.28	9.63	67.50	20.36	101.78
608i1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR LINES OF 20 cm WIDTH	M	4.28	6.95	29.96	10.30	51.50
608i2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR LINES OF 20 cm WIDTH	M	4.28	9.63	90.01	25.98	129.90
608j1	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR 4.0 M ARROWS	EACH	82.44	3.73	216.98	75.79	378.93
608j2	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR 4.0 M ARROWS	EACH	82.44	7.90	851.20	235.38	1,176.92
608n1	PAVEMENT MARKING IN NON-REFLECTIVE CR PAINT FOR STOP	EACH	69.84	3.73	104.08	44.41	222.05
608n2	PAVEMENT MARKING IN NON-REFLECTIVE TP PAINT FOR STOP	EACH	69.84	7.90	333.27	102.75	513.75
608n3	PAVEMENT MARKING IN REFLECTIVE CR PAINT FOR STOP	EACH	69.84	3.73	144.65	54.55	272.77
608n4	PAVEMENT MARKING IN REFLECTIVE TP PAINT FOR STOP	EACH	69.84	7.90	568.32	161.51	807.57
609c	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - SINGLE)	EACH	11.38	81.62	193.77	71.69	358.46
609d	REFLECTORIZED PAVEMENT STUD (RAISED PROFILE TYPE - DOUBLE)	EACH	11.38	81.62	233.77	81.69	408.45
610b	RIGHT OF WAY MARKER	EACH	132.29	121.33	296.83	137.61	688.06
610c	KILOMETRE POST (0.610 X 0.114 X 1.5 M)	EACH	748.49	976.31	1,985.46	927.56	4,637.81
610d	TEN KILOMETRE POST	EACH	1,454.96	1,952.61	4,369.72	1,944.32	9,721.62
611a	CHAIN LINK WIRE FABRIC FENCING 1500 MM HEIGHT WITH PRECAST PRESTRESSED R.C.C. POST	M	161.14	91.00	947.03	299.79	1,498.96