

SINDH COAL AUTHORITY

**Various New Roads Links , Bypasses and Improvement /Widening /Rehabilitation of
Existing Roads in Districts Tharparkar and Mirpurkhas**

**CONTRACT PACKAGE A : Construction of road Naukot , Jhuddo & Tando Jan Muhammad
Bypasses (20.0kms)**

ADP SCHEME 2234/2016-17

Construction of Naukot Bypass (8 kms)

BILL OF QUANTITIES

BILL No.	DESCRIPTION	AMOUNT (PKR)
1	Earthworks	
2	Sub base and Base Courses	
3	Surface Courses	
4	Culverts	
4a	Bridge structures	
5	Drainage And Protection Works	
6	Ancillary Works	
7	Engineer's Facilities	15,505,000
A	Sub Total of Bills	
B	Day Work	
C	Bid Price (A+B) Carried Forward to Form of Bid	

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Bill 1 - EARTHWORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
1.1	101	Clearing and Grubbing	SM	97,427		
1.2	104	Compaction of Natural Ground	SM	97,427		
1.3	106a & 106 (c)	Excavate unsuitable/ surplus Common Material	CM	22,720		
1.4	108c	Formation of Embankment From Borrow Excavation in Common Material	CM	178,342		
1.5	109a	Subgrade preparation in Earth Cut	SM	34,000		
TOTAL FOR BILL 1 CARRIED FORWARD TO SUMMARY :						

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Bill 2 - SUBBASE AND BASE COURSES						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
2.1	201	Granular Subbase	CM	22,707		
2.2	202	Aggregate Base (Grading A)	CM	33,713		
2.3	203b	Asphalt Base Course Plant Mix (Class "B")	CM	5,338		
2.4	209a	Breaking of Existing Road Pavement	CM	2,615		
2.5	209b	Scarification of Existing Road pavement	SM	51,425		
2.6	SS-3	Removal and reuse of existing water bound macadam and bringing it to the require specification	CM	2,000		
TOTAL FOR BILL 2 CARRIED FORWARD TO SUMMARY :						

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Bill 3 - SURFACE COURSES						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
3.1	302	Bituminous Prime Coat (MC-70)	SM	67,424		
3.2	303	Bituminous Tack Coat (Emulsified Asphalt)	SM	66,023		
3.3	304c	Triple Surface Treatment	SM	37,400		
3.4	305b	Asphalt Concrete for Wearing Course Class-B	CM	3,279		
TOTAL FOR BILL 3 CARRIED FORWARD TO SUMMARY :						

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Bill 4 - CULVERTS						
Sr. No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
4.1	107a	Structural excavation in common material	CM	342		
4.2	401f	Lean Concrete	CM	245		
4.3	401a	Concrete Class A3 in culvert, apron, wing wall etc	CM	332		
4.4	404b	Reinforcement steel as per AASHTO M31 grade 60	TON	33		
4.5	107b	Granular back filling	CM	2002		
4.6	410	Brick masonry	CM	3,188		
4.7	412a	Stone masonry dressed coursed with mortar	CM	92		
4.8	509d	Grouted Rip rap Class A	CM	561		
4.9	SP-2	Plaster work	SM	2,117		
4.10	510	Dismantling of structure and obstructions	CM	561		
4.11	509b	Rip Rap Class B	CM	918		
TOTAL FOR BILL 4 CARRIED FORWARD TO SUMMARY :						

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Bill 4a BRIDGE STRUCTURE						
Sr. No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
4.1	107a	Structural excavation in common material	CM	110		
4.2	107d	Granular Backfill	CM	35		
4.3	107e	Common Backfill	CM	18,000		
4.4	401d	Concrete Class D1 (4000 psi)	CM	350		
4.5	401f	Lean Concrete (Foundation and /or Girder Casting Bed)	CM	15		
4.6	401h	Extra over Class A1 with SR Cement	CM	5		
4.7	404a	Reinforcement steel as per AASHTO M31 grade 40	Tons	1		
4.8	404b	Reinforcement steel as per AASHTO M31 grade 60	Tons	56		
4.9	404c	Galvanized Mild Steel	Tons	0.3		
4.1	405a	Pre cast Pre-stressed Concrete Members i) Span 30m	Each	4		
4.11	406ai	Premoulded Joint Filler with Bitumastic joint seal	sm	7		
4.12	406e	Elastomeric Bearing Pads (According to size and thickness)	CM	264000		
4.13	407d3	Cast in place Concrete Pile Dia (dia 1000mm)	M	120		
4.14	407i	Pile Load test to 2.5 times the design load	Each	1		
4.15	509e	Grouted Rip rap Class B	CM	1,000		
4.16	509c	Rip Rap Class C	CM	200		
4.17	SP	PVC sleeve pipes with CAP of dia and wall thickness as shown on drawings	M	30		
4.18	SP	Permanent Steel casing including all fixtures (wall thickness as per drawings)	Tons	10		
4.19	SP	Bridge Expansion Joint	M	20		
4.2	SP	Exploratory / Confirmatory boring and testing in Dry/Wet area including Geotechnical Report (4 copies to be submitted)	M	50		
4.21	SP	Providing and fixing drainage pipe in bridge Deck with steel grating (GI Pipe of dia as shown on drawings)	M	60		
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Bill 5 - DRAINAGE AND PROTECTION WORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
5.1	511b	Grouted stone Pitching (20cm thick)	SM	400		
5.2	509h	Filter Layer of Granular Material	CM	100		
5.3	509d	Grouted Rip Rap Class "A"	CM	2,500		
5.4	401b	Concrete Class "B"	CM	2,000		
Utility Crossing Ducts and Inspection Chambers						
5.6	107a	Structural Excavation in Common Material	CM	80		
5.7	107e	Common backfilling	CM	42		
5.8	401a	Concrete Class A3 i) Underground	CM	11		
5.9	401g	Precase Concrete Class "A3"	CM	1		
5.10	404b	Reinforcement as per AASHTO M 31 grade 60	Ton	2		
5.11	404h	Reinforcement (Structural Shapes) as per ASTM-A36	Ton	0.20		
5.12	501a	Reinforced Concrete Pipe AASHTO M 170 Class II dia 310mm	M	32		
5.13	401b	Concrete Class "B"	CM	9		
5.14	401f	Lean Concrete	CM	2		
TOTAL FOR BILL 5 CARRIED FORWARD TO SUMMARY :						

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Bill 6 - ANCILLARY WORKS						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
6.1	605a	Concrete Beam Guard Rail	M	620		
6.2	605c	Concrete Post for Guard Rail and Guard Rail End Pieces	Each	155		
6.3	607a	Traffic Road Signs Category 1, size 900mm	Each	15		
6.4	607b	Traffic Road Signs Category 2, size 900mm	Each	20		
6.5	607c	Traffic Road Signs Category 3 (a)	Each	25		
6.6	607d	Traffic Road Signs Category 3 (b)	Each	7		
6.7	607e	Traffic Road Signs Category 3 (c)	SM	12		
6.8	608h	Pavement marking in reflective TP paint for Line of 15 cm width	M	3,250		
6.9	608i	Pavement marking in reflective TP paint for Line of 20 cm width	M	13000		
6.10	609d	Reflectorized pavement Studs (raised profile type double)	Each	1625		
6.11	610c	Kilometer Post	Each	7		
6.12	612a	* Furnishing and Planting of trees including maintenance period of 1.5 - 2 years	Each	1,602		
TOTAL FOR BILL 6 CARRIED FORWARD TO SUMMARY :						

* All the sapling shall be either of i) Neem ii) Gul muhr iii) Tali iv) Sirus or as directed by the Engineer . The trees / sapling shall be of minimum 1.5m height at the time of planting and maintain for 1.5 - 2 years

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Bill 7 - Engineer's Facilities						
Sr No.	Spec Ref	ITEM DESCRIPTION	UNIT	QUANTITY	RATE (PKR)	AMOUNT (PKR)
7.1	SS-9.2.1(a)	Provide Resident engineer's Office (Rental)	PS	27	50000	1,350,000
7.2	SS-9.2.1(b)	Provide equipment and furniture for Resident Engineer's Office	Not Payable			1,080,000
7.3	SS-£.2.1(c)	Maintain Resident Engineer's Office	PS	27	40,000	
7.4	SS-9.2.2(a)	Provide Residential Engineer;s Housing (Rental)	PS	27	55,000	1,485,000
7.5	SS-9.2.2(b)	Provide equipment and furnutre for Resident Engineer's Housing	Not Payable			1,485,000
7.6	SS-9.2.2(c)	Maintain Resident Engineer's Housing	PS	27	55,000	
7.7	SS-9.2.3(a)	Provide Engineer's Base Laboratory (Rental)	PS	27	60,000	1,620,000
7.8	SS-9.2.3(b)	Provide Equipment and furniture For Engineer's	Not Payable			1,485,000
7.9	SS-9.2.3(c)	Maintain Engineer's Base Laboratory	PS	27	55,000	
7.10	SS-9.2.4(a)	Provide Engineer's Vehicle 1.Toyota Corolla (XLI) CNG or equivalent, NO 4	Not Payable			7,000,000
7.11	SS-9.2.4(b)	Maintenace of Engineer's Vehicle 1.Toyota Corolla (XLI) CNG or equivalent, NO 4	PS	100	70000	
7.12	SS-9.3.1(a)	Provide, equip and furnish Field accomodation	Not Payable			
7.13	SS-9.3.1(b)	Maintain Field Accommodation	Not Payable			
7.14	SS-9.3.2(a)	Provide equip and furnish Engineer's Field Laboratory	Not payable			
7.15	SS-9.3.2(b)	Maintain Engineer's Field Laboratory	Not Payable			
7.16	SS-9.3.3(a)	Provide Vehicle For Engineer's field Staff	Not Payable			
7.17	SS-9.3.3(b)	Maintain Vehicle for Engineer's field Staff	Not Payable			
7.18	SS-9.3.4(a)	Provide Survey Equipment	Not Payable			
7.19	SS-9.3.4(b)	Maintain Survey Equipment	Not Payable			
TOTAL FOR BILL 7						15,505,000