



AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali, Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

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Page No. :-

Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

Authority No. AMC/Ward B&C/UIDSSMT/2014/184 Date 01.07.2014

12th RA Bill Measurements Pipe Branch Sewer at Azad Chowk to Central Naka

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	RCC PIPE - 300 mm Dia										
	Width of Trench - For Lift 0 to 1.50m- 0.300+0.08+0.08+0.5=0.96m										
	For Lift 1.5 to 3.00m- 0.300+0.08+0.08+0.5+0.4=1.36m										
	For Lift 3.0 to 4.5m- 0.300+0.5+0.08+0.08+0.4+0.4=1.76m										
	KGM 23.15 to KGM 23.15.1	Branch line from Azad Chowk to Central Naka (AC 8.9) For Nalla Calvert Use Only Pipe Supply									
	CH0.00	597.480	596.680	596.580			0.900	0.699			
	CH31.00	597.990	597.592	597.492			0.498				
	Extra Item 9.4 (c) :-Lowering & Laying of RCC NP3 Class pipe of 300mm Dia	1			30.000			30.000		30.000	



B. J. J. J.



AURANGABAD MUNICIPAL CORPORATION.

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Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salam Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshirawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zaha, Padegaon, CIDCO (Airport). Construction, Erection, Testing and Commission of sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zaha, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP 121 pipe line from Golwadi SPS to Nakshirawadi (Kanchanwadi) STP and Ward No 98 to STP for Aurangabad City.

Book No. :-

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Contractor: M/s. Khiseri Infra Pvt Ltd & GFCPL (Joint Venture)

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Azad Chowk to Central Naka R 400mm

12th RA BILL MEASUREMENTS Branch Sewer at Azad Chowk to Central Naka

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No							Page	Quantity	
		GL	IL	EX L	L	B	D				
	400mm Dia Branch at Azad Chowk to Central Naka										
	Width of Trench - For Bottom Lift 0.00-1.50m- 0.4+0.15+0.15+0.5=1.2m										
	From Bottom Lift 1.50m-3.00m- 0.4+0.15+0.15+0.5+0.4=1.6m										
	From Bottom Lift 3.00m-4.50m- 0.4+0.15+0.15+0.5+0.4+0.4=2.0m										
25-Jun-16	AC 8 to AC 8.1	Branch line from Azad Chowk to Gulshan Mahal (CH-193.60, MH No. AC 00)									
	CH0.00	591.210	588.600	588.400				2.810			
	CH20.75	592.100	588.690	588.490				3.610	3.210		
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			19.150	2.000	0.300	11.490		0.000	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			19.150	2.000	0.900	34.470		0.000	
	(b) For Lift 1.5m to 3.0m	1			19.150	1.600	1.100	33.704		0.000	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			19.150	2.000	0.300	11.490		0.000	
	(b) For Lift 1.5m to 3.0m	1			19.150	1.600	0.400	12.256		0.000	
	(c) For Lift 3.0m to 4.5m	1			19.150	1.200	0.210	4.826		0.000	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)										
	(a) For Lift 0 to 1.5m	1			19.150	1.200	0.200	4.596		0.000	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							9.143		0.000	
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			20.000			20.000		0.000	
	Item No 30 :- Refilling the excavated trenches ...									20.000	
	Total Excavation= A										
	Deduction							108.236			
	pipe area	1									
	soling			0.785	19.150	0.550	0.550	4.547			
	PCC							0.000			
	Murum bedding							0.000			
	Total = B							4.596			
								9.143			
29-Jun-16		Net Qty = A - B									
	CH20.75							99.092		0.000	
	CH39.00	592.100	588.690	588.490				3.610		99.092	
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.	592.350	588.790	588.590				3.760	3.685		
	(a) For Lift 0 to 1.5m	1									
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			16.650	2.000	0.300	9.990		11.490	
	(a) For Lift 0 to 1.5m	1			16.650	2.000	1.000	33.300		34.470	
										67.770	



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Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

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Azad Chowk to Central Naka R 400mm

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No							Page	Quantity	
		GL	IL	EX.L	L	B	D				
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			15.000			15.000		37.500	52.500
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation=A							84.924			
	Deduction										
	pipe area	1		0.785	14.000	0.550	0.550	3.324			
	soling							0.000			
	PCC							0.000			
	Murum bedding							3.360			
	Total = B							6.684			
								Net Qty = A - B			
								78.240		194.739	272.978
4-Jun-16											
	CH54.60	593.340	589.590	589.390			3.950				
	CH70.20	593.780	589.815	589.615			4.165	4.058			
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.000	2.000	0.100	2.800		24.280	27.080
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.000	2.000	1.200	33.600		101.370	134.970
	(b) For Lift 1.5m to 3.0m	1			14.000	1.600	0.555	12.432		68.880	81.312
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			14.000	2.000	0.200	5.600		23.750	29.350
	(b) For Lift 1.5m to 3.0m	1			14.000	1.600	0.500	11.200		39.440	50.640
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(b) For Lift 1.5m to 3.0m	1			14.000	1.600	0.445	9.968		11.200	21.168
	(c) For Lift 3.0m to 4.5m	1			14.000	1.200	1.058	17.774		19.014	36.789
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			14.000	1.200	0.200	3.360		11.952	15.312
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							6.684		23.778	30.462
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			15.000			15.000		52.500	67.500
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							93.374			
	Deduction										
	pipe area	1		0.785	14.000	0.550	0.550	3.324			
	soling							0.000			
	PCC							0.000			
	Murum bedding							3.360			
	Total = B							6.684			
								Net Qty = A - B			
								86.690		272.978	359.668
7-Jul-16	AC B.2 to AC B.3										
	CH70.20	593.780	590.415	590.215			3.565				
	CH85.95	594.000	590.750	590.550			3.450	3.508			



Sanjay



AURANGABAD MUNICIPAL CORPORATION.

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Azad Chowk to Central Naka R 400mm

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No			L	B	D		Page	Quantity	
		GL	HL	EX.L							
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.150	2.000	0.100	2.830		27.000	29.910
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			14.150	2.000	0.500	14.150		134.970	149.120
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			14.150	2.000	0.600	16.980		29.350	46.330
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			14.150	2.000	0.300	8.490	0.000	8.490	
	(b) For Lift 1.5m to 3.0m	1			14.150	1.600	1.500	33.960	21.168	55.128	
	(c) For Lift 3.0m to 4.5m	1			14.150	1.200	0.508	8.626	36.789	45.415	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			14.150	1.200	0.200	3.396	15.312	18.708	
	Item No. 11 Transportation of earth Transportation charges including loading & unloading							6.756	30.462	37.218	
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			15.000			15.000	67.500	82.500	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation = A							85.036			
	Deduction										
	pipe area	1		0.785	14.150	0.550	0.550	3.360			
	soling							0.000			
	PCC							0.000			
	Murum bedding							3.396			
	Total = B							6.756			
								Net Qty = A - B	78.280		
10-Jul-16										359.668	437.948
	CH85.95	594.000	590.750	590.550				3.450			
	CH99.20	594.280	591.000	590.800				3.480	3.465		
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			11.650	2.000	0.100	2.330		29.910	32.240
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			11.650	2.000	0.500	11.650		149.120	160.770
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			11.650	2.000	0.600	13.980		46.330	60.310
	Item No. 5 :- Excavation for foundation/pipe trenches in Hard rock etc complete.										
	(a) For Lift 0m to 1.5m	1			11.650	2.000	0.300	6.990	8.490	15.480	
	(b) For Lift 1.5m to 3.0m	1			11.650	1.600	1.500	27.960	55.128	83.088	
	(c) For Lift 3.0m to 4.5m	1			11.650	1.200	0.465	6.501	45.415	51.915	



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Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

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Azad Chowk to Central Naka R 400mm

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			16.635	1.600	0.300	7.985		139.214	147.198
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			16.635	1.600	1.000	26.616		249.800	276.416
	(b) For Lift 1.5m to 3.0m	1			16.635	1.200	0.965	19.263		89.793	109.056
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			16.635	1.600	0.200	5.323		108.675	113.998
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			16.635	1.200	0.200	3.992		46.393	50.386
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							7.943		92.296	100.238
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			17.500			17.500		205.000	222.500
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							59.187			
	Deduction										
	pipe area	1		0.785	16.635	0.550	0.550	3.950			
	soiling							0.000			
	PCC							0.000			
	Murum bedding							3.992			
	Total = B							7.943			
	Net Qty = A - B							51.245		822.971	874.216
22-Jul-16	AC 8.7 to AC 8.8										
	CH231.80	595.050	592.870	592.670				2.380			
	CH259.95	595.300	593.220	593.020				2.280	2.330		
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			26.820	1.600	0.900	38.621		147.198	185.819
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			26.820	1.600	0.400	17.165		276.416	293.581
	(b) For Lift 1.5m to 3.0m	1			26.820	1.200	0.830	26.713		109.056	135.769
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			26.820	1.600	0.200	8.582		113.998	122.580
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			26.820	1.200	0.200	6.437		50.386	56.822
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							12.806		100.238	113.044
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			27.500			27.500		222.500	250.000
	Item No 30 :- Refilling the excavated trenches ...										



Deviyani



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Name of Agency:- M/s Khilari Infrastructure Pvt. Ltd. & Co. (P) Ltd.

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Azad Chowk to Central Naka R 400mm

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Total Excavation= A										
	Deduction							91.081			
	pipe area	1		0.785	26.820	0.550	0.550	6.369			
	soling							0.000			
	PCC							0.000			
	Murum bedding							6.437			
	Total = B							12.806			
								Net Qty = A - B			
23-Jul-16								78.275	874.216	952.491	
	CH259.95	595.300	593.220	593.020			2.280	2.327			
	CH293.10	595.750	593.575	593.375			2.375				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			31.820	1.600	0.700	35.638	185.819	221.458	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			31.820	1.600	0.500	25.456	293.581	319.037	
	(b) For Lift 1.5m to 3.0m	1			31.820	1.200	0.827	31.578	135.769	167.347	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			31.820	1.600	0.300	15.274	122.580	137.854	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)	1			31.820	1.200	0.200	7.637	56.822	64.459	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							15.193	113.044	128.237	
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia	1			32.500			32.500	250.000	282.500	
	Item No 30 :- Refilling the excavated trenches ...										
	Total Excavation= A							107.946			
	Deduction										
	pipe area	1		0.785	31.820	0.550	0.550	7.556			
	soling							0.000			
	PCC							0.000			
	Murum bedding							7.637			
	Total = B							15.193			
								Net Qty = A - B			
25-Jul-16	AC 8.8 to AC 8.9							92.753	952.491	1045.244	
	CH293.10	595.750	593.775	593.575			2.175	2.350			
	CH324.30	596.460	594.135	593.935			2.525				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murum etc complete.										
	(a) For Lift 0 to 1.5m	1			28.540	1.600	1.000	45.664	221.458	267.122	
	(b) For Lift 1.5m to 3.0m	1			28.540	1.200	0.850	29.111	89.853	118.964	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			28.540	1.600	0.300	13.699	319.037	332.736	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			28.540	1.600	0.200	9.133	137.854	146.987	



de 10/07/2016



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Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Vencture)

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Azad Chowk to Central Naka R 400mm

Date	Particulars of work	DETAILS						Content of area	Last measurement		TOTAL TO DATE	
		No			L	B	D		Page	Quantity		
		GL	IL	EX.L								
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc complete.											
	(a) For Lift 0 to 1.5m	1			29.420	1.600	1.100	51.779		302.194	353.973	
	(b) For Lift 1.5m to 3.0m	1			29.420	1.200	0.885	31.244		141.980	173.224	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.											
	(a) For Lift 0 to 1.5m	1			29.420	1.600	0.300	14.122		343.258	357.380	
	Item No. 4:- Excavation for foundation/pipe trenches in soft rock etc complete.											
	(a) For Lift 0 to 1.5m	1			29.420	1.600	0.100	4.707		154.001	158.708	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)											
		1			29.420	1.200	0.200	7.061		76.570	83.630	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							14.047		152.330	166.377	
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia											
		1			30.000			30.000		335.000	365.000	
	Item No 30 :- Refilling the excavated trenches ...											
	Total Excavation= A							101.852				
	Deduction											
	pipe area	1		0.785	29.420	0.550	0.550	6.986				
	soling							0.000				
	PCC							0.000				
	Murrum bedding							7.061				
	Total = B							14.047				
								Net Qty = A - B		87.805	1194.382	1282.187
1-Aug-16	AC B.10 to AC 8.11											
	CH378.30		596.680	595.085	594.885			1.795	1.760			
	CH411.05		597.210	595.685	595.485			1.725				
	Item No. 1 :- Excavation for foundation/pipe trenches in all types of soil & soft murrum etc complete.											
	(a) For Lift 0 to 1.5m	1			30.090	1.600	1.500	72.216		353.973	426.189	
	(b) For Lift 1.5m to 3.0m	1			30.090	1.200	0.260	9.388		173.224	182.612	
	Item No. 7 :- Filling in plinth and floors/ trenches etc complete.(bedding)											
		1			30.090	1.200	0.200	7.222		83.630	90.852	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							14.367		166.377	180.743	
	Item No.17 (a) :- Lowering & Laying RCC NP3 class pipe of 400mm Dia											
		1			31.250			31.250		365.000	396.250	
	Item No 30 :- Refilling the excavated trenches ...											
	Total Excavation= A							81.604				
	Deduction											
	pipe area	1		0.785	30.090	0.550	0.550	7.145				
	soling							0.000				
	PCC							0.000				
	Murrum bedding							7.222				
	Total = B							14.367				
								Net Qty = A - B		67.237	1282.187	1349.425



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

Book No. :- 169
Page No. :-

Name of Agency:- M/s Khilari Infrastructure Pvt Ltd & GECPI (Joint Venture)

1 of 4

Azad Chowk to Central Naka R 1.5m MH Excavation

12th RA BILL MEASUREMENTS

Branch Sewer at Azad Chowk to Central Naka

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	No IL	EX.L	L	B	D		Page	Quantity	
	Excavation of Chamber - For 1.50m dia Manhole (upto a depth of 2.0m to 5.0m)- 1.50+0.35+0.35+0.5+0.5=3.20m										
	Breadth for Manhole=3.2*3.2=10.24m										
	ACB.1										
	CH39.00	592.350	588.790	588.540			3.810				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.300	2.412		0.000	2.412
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	1.000	8.038		0.000	8.038
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.900	7.235		0.000	7.235
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.200	1.608		0.000	1.608
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.600	4.823		0.000	4.823
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.200	1.608		0.000	1.608
	ITEM No. 5 :- Excavation for foundation / pipe trenches in laterite rock masses etc complete										
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.610	4.903		0.000	4.903
	Item No. : 11 Transportation of earth Transportation charges							11.396		0.000	11.396
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							30.626			
	Deduction										
	Brick work	1		0.785	2.280	2.280	1.560	6.366			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								11.396			
	Net Qty = A - B							19.231		0.000	19.231
	ACB.2										
	CH70.20	593.780	589.815	589.565			4.215				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.100	0.804		2.412	3.215
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	1.200	9.646		8.038	17.684
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.555	4.461		7.235	11.696
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.200	1.608		1.608	3.215
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.500	4.019		4.823	8.842
	ITEM No. 5 :- Excavation for foundation / pipe trenches in laterite rock masses etc complete										
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.445	3.577		0.000	3.577



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali, Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

Book No. :- 170

Page No. :-

Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Venture)

2 of 4

Azad Chowk to Central Naka R 1.5m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		GL	IL	EX.L	L	B	D		Page	Quantity	
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	1.215	9.767			
	Item No. : 11 Transportation of earth Transportation charges							13.048		4.903	14.670
	Item No. 30 :- Refilling the excavated trenches ...									11.396	24.444
	Total Excavation=										
	Deduction							33.882			
	Brick work	1		0.785	2.280	2.280	1.965	8.019			
	PCC	1		0.785	1.540	1.540	2.000	3.723			
	Soling	1		0.785	2.580	2.580	0.250	1.306			
		1		0.785	2.580	2.580	0.000	0.000			
								13.048			
	Net Qty = A - B							20.833		19.231	40.064
	AC B.3										
	CH99.20	594.280	591.000	590.750			3.530				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.100	0.804		3.215	4.019
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.500	4.019		17.684	21.704
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.600	4.823		3.215	8.038
	ITEM No. 5 :- Excavation for foundation / pipe trenches in laterite rock masses etc complete										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.300	2.412		0.000	2.412
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	1.500	12.058		3.577	15.635
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.530	4.260		14.670	18.930
	Item No. : 11 Transportation of earth Transportation charges							10.253		24.444	34.697
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=										
	Deduction							28.376			
	Brick work	1		0.785	2.280	2.280	1.280	5.223			
	PCC	1		0.785	1.540	1.540	2.000	3.723			
	Soling	1		0.785	2.580	2.580	0.250	1.306			
		1		0.785	2.580	2.580	0.000	0.000			
								10.253			
	Net Qty = A - B							18.122		40.064	58.187
	AC B.4										
	CH135.70	594.400	591.850	591.600			2.800				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.700	5.627		4.019	9.646
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	1.300	10.450		0.000	10.450
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.400	3.215		21.704	24.919
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.400	3.215		8.038	11.254
	Item No. : 11 Transportation of earth Transportation charges							7.274		34.697	41.971



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport). Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

Book No. :-

Page No. :- **171**

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Azad Chowk to Central Naka R 1.5m MH Excavation

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=						22.508				
	Deduction										
	Brick work	1		0.785	2.280	2.280	0.550	2.244			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								7.274			
								Net Qty = A - B			
								15.233	58.187	73.420	
	AC8.5										
	CH166.90	594.400	592.000	591.750			2.650				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	1.000	8.038	9.646	17.684	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	1.150	9.244	10.450	19.694	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.300	2.412	24.919	27.331	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.200	1.608	11.254	12.861	
	Item No. : 11 Transportation of earth Transportation charges							6.662	41.971	48.633	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation=							21.302			
	Deduction										
	Brick work	1		0.785	2.280	2.280	0.400	1.632			
		1		0.785	1.540	1.540	2.000	3.723			
	PCC	1		0.785	2.580	2.580	0.250	1.306			
	Soling	1		0.785	2.580	2.580	0.000	0.000			
								6.662			
								Net Qty = A - B			
								14.640	73.420	88.060	
	AC8.7										
	CH231.80	595.050	592.670	592.420			2.630				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.300	2.412	17.684	20.096	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.000	0.000	19.694	19.694	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	1.000	8.038	27.331	35.369	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	1.130	9.083	11.696	20.779	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.200	1.608	12.861	14.469	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.000	0.000	8.842	8.842	
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.000	0.000	1.608	1.608	
	ITEM No. 5 :- Excavation for foundation / pipe trenches in laterite rock masses etc complete										
	(a) For Lift 0 to 1.5m	1			0.785	10.240	0.000	0.000	2.412	2.412	
	(b) For Lift 1.5m to 3.0m	1			0.785	10.240	0.000	0.000	15.635	15.635	
	(c) For Lift 3.0m to 4.5m	1			0.785	10.240	0.000	0.000	18.930	18.930	
	Item No. : 11 Transportation of earth Transportation charges							6.580	48.633	55.214	



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP/DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

Book No. :-
Page No. **173**

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Azad Chowk to Central Naka R 1.2 MH Exc.

17th R A BILL MEASUREMENTS OF CHEMBERS Azad Chowk to Central Naka

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No			L	B	D		Page	Quantity	
		GL	IL	EX.L							
	Sewer at Azad Chowk to Central Naka										
	Excavation of Chamber - For 1.20 dia chamber (upto 2.0m depth)- 1.20*0.50*0.5+0.5=2.66m										
	Bredth for chember upto 2m=2.66*2.66=7.075m										
	AC 8.6										
	CH198.10	594.300	592.340	592.090			2.210				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.300	1.67	20.10	21.76	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.700	3.89	35.37	39.26	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.300	1.67	14.47	16.14	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.910	5.05	8.84	13.90	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							3.394	55.21	58.61	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							12.274			
	Deduction										
	Brick work	1		0.785	1.31	1.31	1.960	2.64			
	Brick work							0.00			
	PCC	1		0.785	1.96	1.96	0.250	0.75			
	Murrum bedding							0.00			
	Total (B)							3.39			
								Net Qty = A - B	8.88	102.62	
	AC 8.8										
	CH293.10	595.750	593.575	593.325			2.425				
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, Soft murrum etc										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.700	3.89	21.76	25.65	
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murrum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.500	2.78	39.26	42.03	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.925	5.14	20.78	25.92	
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.300	1.67	16.14	17.80	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							3.684	58.61	62.29	
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							13.468			
	Deduction										
	Brick work	1		0.785	1.31	1.31	2.175	2.93			
	Brick work							0.00			



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Nalmi Ah. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport), Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) SPS and Ward No.98 to SPS for Aurangabad City.

Book No. :- **174**
Page No. :-

2 of 4

Azad Chowk to Central Haka R 12 MH Etc.

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity
		No	GL	HL	EX.L	L	B		D	Page	
	PCC		1		0.785	1.96	1.96	0.250	0.75		
	Murum bedding								0.00		
	Total (B)								3.68		
					Net Qty = A - B				9.70	111.50	121.28
	AC B.9										
	CH124.30	596.460	594.135	593.805				2.575			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, soft murum etc										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	1.000	5.55		25.65	31.20
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	1.075	5.97		19.69	25.66
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.300	1.67		42.03	43.70
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.200	1.11		17.80	18.91
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							3.886		62.29	66.18
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							14.301			
	Deduction										
	Brick work	1			0.785	1.31	1.31	2.325	3.13		
	Brick work								0.00		
	PCC	1			0.785	1.96	1.96	0.250	0.75		
	Murum bedding								0.00		
	Total (B)							3.89			
					Net Qty = A - B				10.42	121.28	131.70
	AC B.10										
	CH370.30	596.680	594.405	594.235				2.445			
	Item No. 1 :- Excavation for foundation/pipe trenches in earth soils, soft murum etc										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	1.100	6.11		31.20	37.31
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.945	5.25		25.66	30.91
	Item No. 2 :- Excavation for foundation/pipe trenches in Hard murum etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.300	1.67		43.70	45.37
	Item No. 4 :- Excavation for foundation/pipe trenches in soft rock etc complete.										
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.100	0.56		18.91	19.47
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							3.711		66.18	69.89
	Item No. 30 :- Refilling the excavated trenches ...										
	Total Excavation(A)=							13.579			
	Deduction										
	Brick work	1			0.785	1.31	1.31	2.195	2.96		
	Brick work								0.00		
	PCC	1			0.785	1.96	1.96	0.250	0.75		
	Murum bedding								0.00		
	Total (B)							3.71			
					Net Qty = A - B				9.87	131.70	141.57
	AC B.11										



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AURANGABAD MUNICIPAL CORPORATION.

(From No.52)

Measurement Book

Name of work:- Development of Underground Sewerage Collection system for Zone I to VI and Zone Salim Ali. Constructing, Erecting, Testing and Commissioning of Sewage Treatment Plant based on modern technology at Nakshtrawadi (Kanchanwadi), Banewadi, Siddharth Garden, Zalta, Padegaon, CIDCO (Airport), Construction, Erection, Testing and Commission of Sewage pumping stations at Banewadi, Siddharth Garden, Padegaon, Golwadi, Zalta, Ward No.98 and CIDCO (Airport). Providing, lowering, laying jointing and testing rising main GRP DI pipe line from Golwadi SPS to Nakshtrawadi (Kanchanwadi) STP and Ward No.98 to STP for Aurangabad City.

Book No. :-
Page No. :- **176**

Name of Agency:- M/s Khilari Infrastructure Pvt.Ltd. & GECPL (Joint Vencture)

4 of 4

Azad Chowk to Central Naka R 1.2 MH Exc.

Date	Particulars of work	DETAILS						Content of arrears	Last measurement		Total Upto Date Quantity	
		No			L	B	D		Page	Quantity		
		GL	IL	EX.L								
	(a) For Lift 0 to 1.5m	1			0.785	7.075	0.000	0.00		2.41	2.41	
	(b) For Lift 1.5m to 3.0m	1			0.785	7.075	0.000	0.00		15.63	15.63	
	(c) For Lift 3.0m to 4.5m	1			0.785	7.075	0.000	0.00		18.93	18.93	
	Item No. : 11 Transportation of earth Transportation charges including loading & unloading							3.044		75.88	78.93	
	Item No. 30 :- Refilling the excavated trenches ...											
	Total Excavation(A)=							10.830				
	Deduction											
	Brick work	1			0.785	1.31	1.31	1.700	2.29			
	Brick work								0.00			
	PCC	1			0.785	1.96	1.96	0.250	0.75			
	Murram bedding								0.00			
	Total (B)							3.04				
					Net Qty = A - B					7.79	156.85	164.63



S. J. Dyangy