

Part A

Name of work: Model estimate for construction of injection Recharge well (Note: These works are to be taken up where in near by density of irrigation and drinking water bore wells is high.)

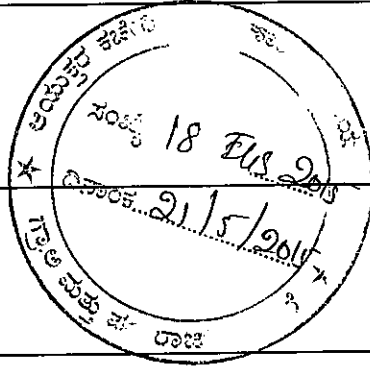
Financial Year : 2015-16

Head of Account = Mahatma Gandhi NREGS Karnataka

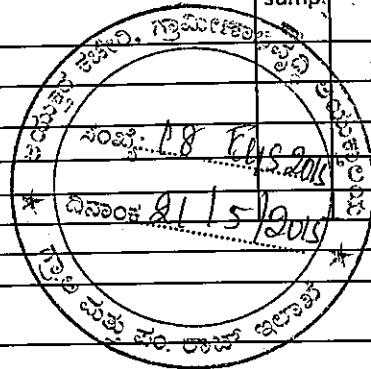
Important notes

1. Some of the rates adopted in this estimate are as per M.I. Circle schedule of rates of Bengaluru for 2014-15 continued for 2015-16.
2. The area weightage pertaining to the respective areas to be adopted as per respective schedule of rates of respective circles of respective departments.
3. Some of the rates adopted in this estimate are also Nrega SoR for year 2015-16.
4. This is only a model estimate, the Officer/Engineer-in-charge should visit the site and prepare the estimate based on (i) Actual site conditions width and depths . (ii) Foundation to be designed as per existing geological conditions.
5. The overall variations in the cost should not exceed 10% of the estimated cost. In case if it exceeds 10% same should be got approved from the Commissionerate.
6. For procurement of material KTPP Act 1999 and rules 2000 to be followed.
7. For purpose of this estimate average lead of 25km is considered and lead charges are worked out as per MI SR .For actual estimate actual approve leads leads should be considered and estimate be prepared
8. Where rates are not available market rates are considered

Sl no	Item as per SoR (prevailing nrega or line dept or as per approved Data Sheet) or as per market	Unit	Quantity	Rate (In Rs)	Amount (in Rs) (col 4 x col 5)
1	2	3	4	5	6
1	Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conducts either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specification Including shoring strutting danger lighting (NREGA SoR 2015-16) for ordinary soil				
a	For lift range 0.00m to 1.50 m	cum	13.83	198.06	2,739.17
b	For lift range 1.50m to 3.00 m Rate analysis MI SR pno 23 Basic rate = Rs198.06 add for lift =Rs 7.30 total =Rs205.36	cum	11.49	205.36	2,359.59
c	For lift range 3.00m to 4.50 m Rate analysis MI SR pno 23 Basic rate = Rs198.06 add for lift =Rs 14.70 total =Rs 212.76	cum	9.15	212.76	1,946.75
d	For lift range 4.50m to 6.00 m Rate analysis MI SR pno 23 Basic rate = Rs198.06 add for lift =Rs 22.00 total =Rs 220.06	cum	6.78	220.06	1,492.01
2	Supplying and fixing RC rings NP2 type 900mm dia of 300mm length (internal) as per detailed standard specifications including lifting lowering loading unloading supplying to site of work including transportation and constructing as per design and drawings at site. (Market rate)	Each	20	600	12,000.00
3	Supplying and fixing RCC cap 1000mm dia 100mm thick as per detailed standard specifications including lifting lowering loading unloading supplying to site of work including transportation and constructing as per design and drawings at site so that nobody or no animal should fall. (Market rate)	Each	1	1500	1,500.00
a	Supply of coarse aggregate 80 -40mm size (INO22 pn 6 of MI SR)	cum	5.44	335	1,822.40



SI no	Item as per SoR(prevaling nrega or line dept or as per approved Data Sheet) or as per market	Unit	Quantity	Rate (In Rs)	Amount (in Rs) (col 4 x col 5)
1	2	3	4	5	6
4	Extra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) Rate analysis Lead charges up to 5km =107.10 Lead charges beyond 5km up to <u>25km (20x9.20) = 184.00</u> Total rate = 291.10	CUM	5.44	291.10	1,583.58
	Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15)	CUM	5.44	124.80	678.91
	Supply of hard granite or hard basalt boulders of size 150mm to 450mm at quarry (Market rate)	cum	30.96	200.00	6,192.00
5	Extra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) Rate analysis Lead charges up to 5km =107.10 Lead charges beyond 5km up to <u>25km (20x9.20) = 184.00</u> Total rate = 291.10	cum	30.96	291.10	9,012.46
	Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) (83.20+41.60) = 124.80	cum	30.96	124.80	3,863.81
6	Providing and constructing dry rubble rock-toe using rubble and store chips from dump approved source uncluding cost of all materials, machinaery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts.(Item No.42 P No 40 of M I Circle Bangalore for the year 2014-15) Basic rate Rs411.00 Rate analysis deduct Lead charges up to 1km as it is covered under Ino 1b = -Rs67.30 deduct Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) (83.20+41.60) = -124.80 Total rate = 218.90	cum	30.96	218.90	6,777.14
7	Drilling the recharge injection bore well 150mm dia as per standard specification including cost of rigs transport drilling consumables etc complete (Market rate)	Rmt	60	240	14,400.00
8	Casing pipe(MS) including top MS cap fixing in site during drilling (Market rate)	Rmt	23	1000	23,000.00
9	Drilling the holes/perforation of required size & nos around casing pipe and covered with perforated cloth and tied with GL wire a around the pipe. Lump sump	Lump sump.			1,000.00
	sub total				90,367.82
10	Add 1% for supervision charges				904.00
11	Add forsharpening of tools 98days Rs 10/day /person				980.00
12	Name Board and Rounding off				1,248.18
	Total				93,500.00
	Sign of Engineer				
	Sign of PO/EO				



Measurement sheet

Name of work: Model estimate for construction of injection Recharge well (Note: These works are to be taken up where in near by density of irrigation and drinking water bore wells is high.)

Financial year

2015-16

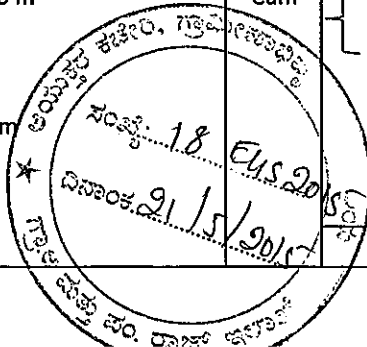
Head of Account = Mahatma Gandhi NREGS Karnataka

Work Code (As in nregasoft)

Important notes

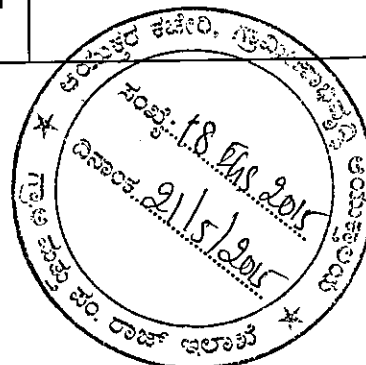
1. Some of the rates adopted in this estimate are as per M.I. Circle schedule of rates of Bengaluru for 2014-15 continued for 2015-16.
2. The area weightage pertaining to the respective areas to be adopted as per respective schedule of rates of respective circles of respective departments.
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5. The overall variations in the cost should not exceed 10% of the estimated cost. In case if it exceeds 10% same should be got approved from the Commissionerate.
6. For procurement of material KTPP Act 1999 and rules 2000 to be followed.
7. For purpose of this estimate average lead of 25km is considered and lead charges are worked out as per MI SR. For actual estimate actual approve leads should be considered and estimate be prepared
8. Where rates are not available market rates are considered

Sl no	Item as per SoR (prevailing nrega or line dept or as per approved Data Sheet) or as per market	Unit	Measurements				Quantity
			No	Length (in Mt)	Breadth (in Mt)	Depth (in Mt)	
1	2	3	4	5	6	7	8
1	Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conducts either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specification Including shoring strutting danger lighting (NREGA SoR 2015-16) for ordinary soil	Cum					
	a For lift range 0.00m to 1.50 m	Cum	$\left[\frac{[(5.00 \times 2.00) + (4.22 \times 2.00)]}{2} \right] \times 1.50$				13.83
	b For lift range 1.50m to 3.00 m	Cum	$\left[\frac{[(4.22 \times 2.00) + (3.44 \times 2.00)]}{2} \right] \times 1.50$				11.49
	c For lift range 3.00m to 4.50 m	Cum	$\left[\frac{[(3.44 \times 2.00) + (2.66 \times 2.00)]}{2} \right] \times 1.50$				9.15
	For lift range 4.50m to 6.00 m	Cum	$\left[\frac{[(2.66 \times 2.00) + (2 \times 2.00)]}{2} \right] \times 1.20$				5.59
d	Add for box cut at bpttom			2.00x2.00x0.30			1.20
			Total				6.78



PROB 4

SI no	Item as per SoR (prevailing nrega or line dept or as per approved Data Sheet) or as per market	Unit	Measurements				Quantity
			No	Length (in Mt)	Breadth (in Mt)	Depth (in Mt)	
1	2	3	4	5	6	7	8
2	Supplying and fixing RC rings NP2 type 900mm dia of 300mm length (internal) as per detailed standard specifications including lifting lowering loading unloading supplying to site of work including transportation and constructing as per design and drawings at site. (Market rate)	Each			1x20		20
3	Supplying and fixing RCC cap 1000mm dia 100mm thick as per detailed standard specifications including lifting lowering loading unloading supplying to site of work including transportation and constructing as per design and drawings at site so that nobody or no animal should fall. (Market rate)	Each			1x1		1
4	Supply of coarse aggregate 80-40mm size (INO22 pn 6 of MI SR) a. at top b. at bottom sub Total deduct for rings Net qty	cum		$\frac{[(5.00+4.74)] \times 2.00 \times 0.50}{2}$ $2.00 \times 2.00 \times 0.30$ $\pi/4 \times 1.00^2 \times 0.80$			4.87 <u>1.20</u> <u>6.07</u> <u>-0.63</u> <u>5.44</u>
4	b Extra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) Rate analysis Lead charges up to 5km =107.10 Lead charges beyond 5km up to 25km $(20 \times 9.20) = 184.00$ Total rate = 291.10						5.44
4	c Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) $(83.20+41.60) = 124.80$						5.44
5	a Supply of hard granite or hard basalt boulders of size 150mm to 450mm at quarry (Market rate) deduct rings net qty	cum		$\frac{(4.74 \times 2.00) \times 2.00 \times 5.20}{2}$ $\pi/4 \times 5.20 \times 1.00^2$			35.05 <u>-4.08</u> 30.96
5	b Extra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) Rate analysis Lead charges up to 5km =107.10 Lead charges beyond 5km up to 25km $(20 \times 9.20) = 184.00$ Total rate = 291.10	cum			As per I no 5a		30.96
5	c Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) $(83.20+41.60) = 124.80$	cum			As per I no 5a		30.96

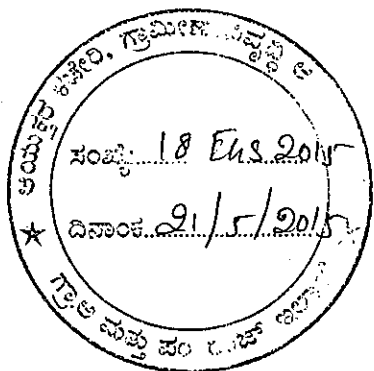


PAD 5

Sl no	Item as per SoR(prevaling nrega or line dept or as per approved Data Sheet) or as per market	Unit	Measurements				Quantity
			No	Length (in Mt)	Breadth (in Mt)	Depth (in Mt)	
1	2	3	4	5	6	7	8
6	Providing and constructing dry rubble rock-toe using rubble and store chips from dump approved souce uncluding cost of all materials, machinaery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts.(Item No.42 P No 40 of M I Circle Bangalore for the year 2014-15) (Item No.42 P No 40 of M I Circle Bangalore for the year 2014-15) Basic rate Rs411.00 Rate analysis deduct Lead charges up to 1km as it is covered under Ino 1b = - Rs67.30 deduct Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) (83.20+41.60) = -124.80 Total rate = 218.90	cum	As per I no 5a				30.96
7	Drilling the recharge injection bore well 150mm dia as per standard specification including cost of rigs transport drilling consumables etc complete (Market rate)	Rmt	1x60.00m				60.00
8	Casing pipe(MS) including top MS cap fixing in site during drilling (Market rate)	Rmt	1x23m				23.00
9	Drilling the holes/perforation of required size & nos around casing pipe and covered with perforated cloth and tied with GL wire a around the pipe. Lump sump	Lump sump					
10	Add 1% for supervision charges	Lump sump					
11	Add forsharpening of tools 90 days Rs 10/day /person	Lump sump					
12	Name Board and Rounding off	Lump sump					

Sign of Engineer

Sign of PO/EO



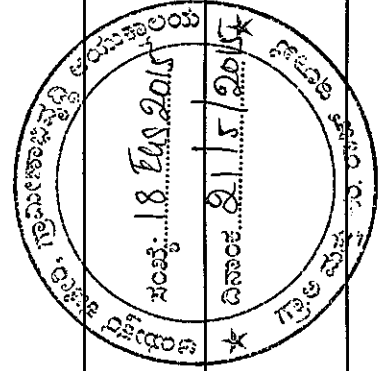
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**Part B
Detailed Estimation (Calculation) of labour and Material requirement**

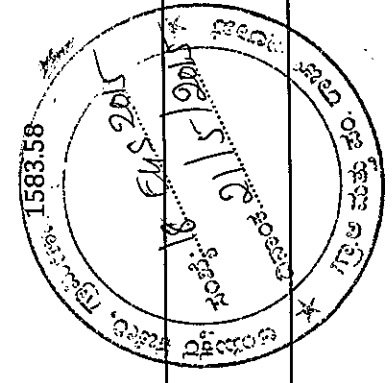
Name of work =
 Financial year =
 Head of Account =
 Work Code(As in nregasoft) =

Name of work: Model estimate for construction of injection Recharge well(Note: These works are to be taken up where in near by density of irrigation and drinking water bore wells is high .)
 2014-15
 Mahatma Gandhi NREGS Karnataka

Sl no	Item as per SoR(prevaling nrega or line dept or As per approved Data Sheet) as in part A detailed and abstract estimate	Unit	Quantity	Unskilled Labour Component		Skilled, Semi skilled wage and Material component including essential machinery like rollers etc but excluding unskilled labour displacing machinery	8
				No of Person days	Wage rate for 2015-16 fixed by GOI, MoRD		
1	2 Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conducts either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specification Including shoring strutting danger lighting (NREGA SoR 2015-16) for ordinary soil	3	4	5	6	7	8
a	For lift range 0.00m to 1.50 m	cum	13.83	13.43	204.00	2739.17	
	For lift range 1.50m to 3.00 m	cum	11.49	11.57	204.00	2359.59	
	For lift range 3.00m to 4.50 m	cum	9.15	9.54	204.00	1946.75	

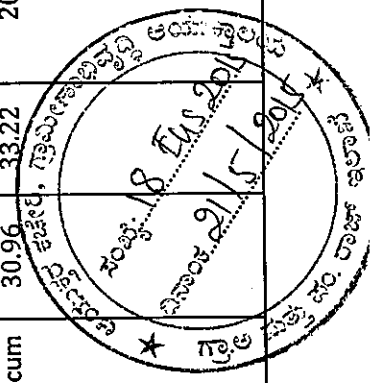


			displacing machinery				
			No of Person days	Wage rate for 2015-16 fixed by GOI, MoRD	Amount (in Rs) (col 5 x col 6)	Amount (in Rs) (col 11 x col 12)	
			5	6	7	8	
	2	3	4	5	6	7	8
lift range 4.50m to 6.00 m		cum	6.78	7.31	204.00	1492.01	
plying and fixing RC rings NP2 type 900mm dia of 300mm th(internal)as per detailed standard specifications including g lowering loading unloading supplying to site of work uding transportation and constructing as per design dand wings at site.(Market rate)		Each					12000.00
plying and fixing RCC cap 1000mm dia 100mm thick as per ailed standard specifications including lifting lowering loading loading supplying to site of work including transportation and nstructing as per design dand drawings at site so that nobody or animal should fall.(Market rate)		Each					1500.00
ply of coarse aggregate 80 -40mm size(INO22 pn 6 of M I SR)		cum	5.44				1822.40
tra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle ngalore for the year 2014-15)		CUM	5.44				
te analysis ad charges up to 5km =107.10 ad charges beyond 5km up to ikm (20x9.20) = 184.00 ital rate = 291.10							
ading and unloading charges (Item No.5 P No 21 of M I Circle ngalore for the year 2014-15) 3.20+41.60) = 124.80		CUM	5.44	3.33	204.00	678.91	



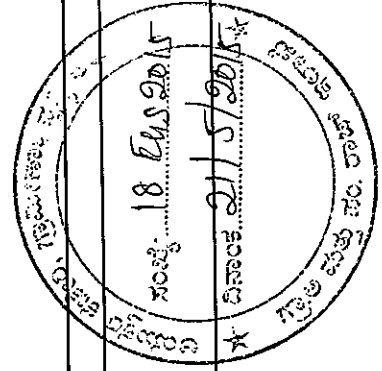
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Sl no	Item as per SoR (prevailing nrega or line dept or As per approved Data Sheet) as in part A detailed and abstract estimate	Unit	Quantity	Unskilled Labour Component		Skilled, Semi skilled wage and Material component including essential machinery like rollers etc but excluding unskilled labour displacing machinery	
				No of Person days	Wage rate for 2015-16 fixed by GOI, MoRD		Amount (in Rs) (col 11 x col 6)
				5	6	7	8
1	2	3	4	5	6	7	8
a	Supply of hard granite or hard basalt boulders of size 150mm to 450mm at quarry (Market rate)	cum	30.96				6192.00
b	Extra Lead charges upto 25kms (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) Rate analysis Lead charges up to 5km =107.10 Lead charges beyond 5km up to 25km (20x9.20) = 184.00 Total rate = 291.10	cum	30.96				9012.46
c	Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) (83.20+41.60) = 124.80	cum	30.96	18.94	204.00	3863.81	
6	Providing and constructing dry rubble rock-toe using rubble and store chips from dump approved source including cost of all materials, machinaery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts.(Item No.42 P No 40 of M I Circle Bangalore for the year 2014-15) Basic rate Rs411.00 Rate analysis deduct Lead charges up to 1km as it is covered under lno 1b = - Rs67.30 deduct Loading and unloading charges (Item No.5 P No 21 of M I Circle Bangalore for the year 2014-15) (83.20+41.60) = -124.80	cum	30.96	33.22	204.00	6777.14	

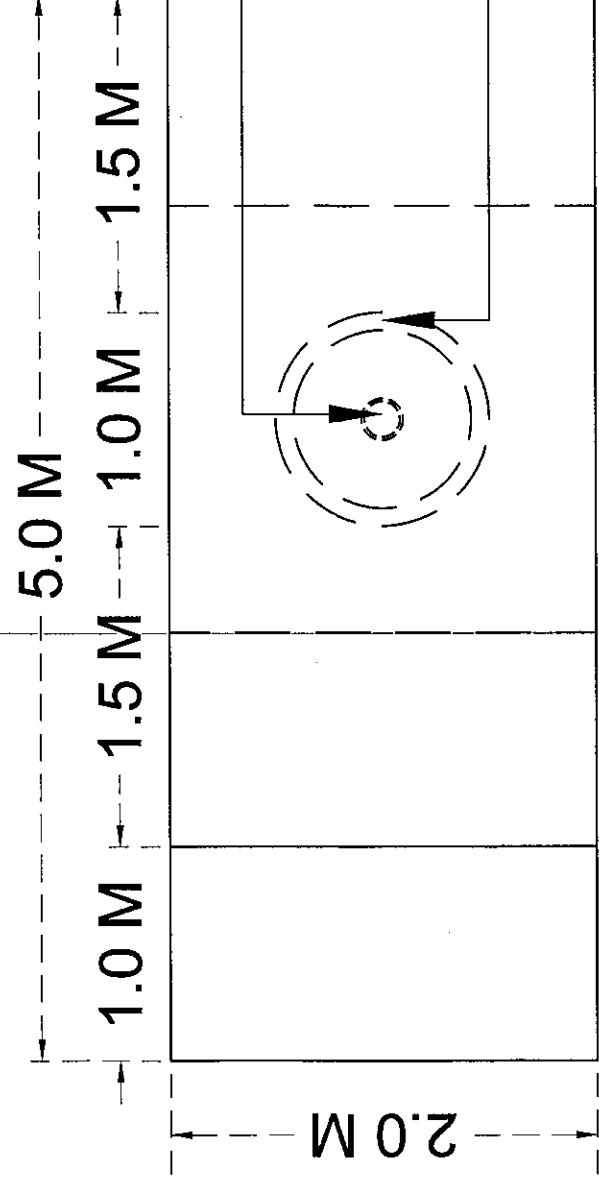


PROJ

Sl no	Item as per SoR (prevailing nrega or line dept or As per approved Data Sheet) as in part A detailed and abstract estimate	Unit	Quantity	Unskilled Labour Component		Semi skilled wage and Material component including essential machinery like rollers etc but excluding unskilled labour displacing machinery	
				No of Person days	Wage rate for 2015-16 fixed by GOI, MoRD (col 5 x col 6)		Amount (in Rs) (col 11 x col 12)
1	2	3	4	5	6	7	8
7	Drilling the recharge injection bore well 150mm dia as per standard specification including cost of rigs transport drilling consumables etc complete (Market rate)/(Item No.42 P No 40 of M I Circle Bangalore for the year 2014-15)	Rmt					14,400.00
8	Casing pipe(MS) including top MS cap fixing in site during drilling (Market rate)	Rmt					23,000.00
9	Drilling the holes/perforation of required size & nos around casing pipe and covered with perforated cloth and tied with GL wire a Lump sump	Lump sump					1,000.00
10	Add 1% for supervision charges						904.00
11	Add forsharpening of tools 98 days Rs 10/day/person						980.00
12	Name Board and Rounding off						1248.00
	Total			97.34 say 98 man days		19857.38	73642.44
			Unskilled labour Percentage		21.58 %		
			Material Percentage		78.42 - %		
			Sign of Engineer		Sign of EO/PO and seal		



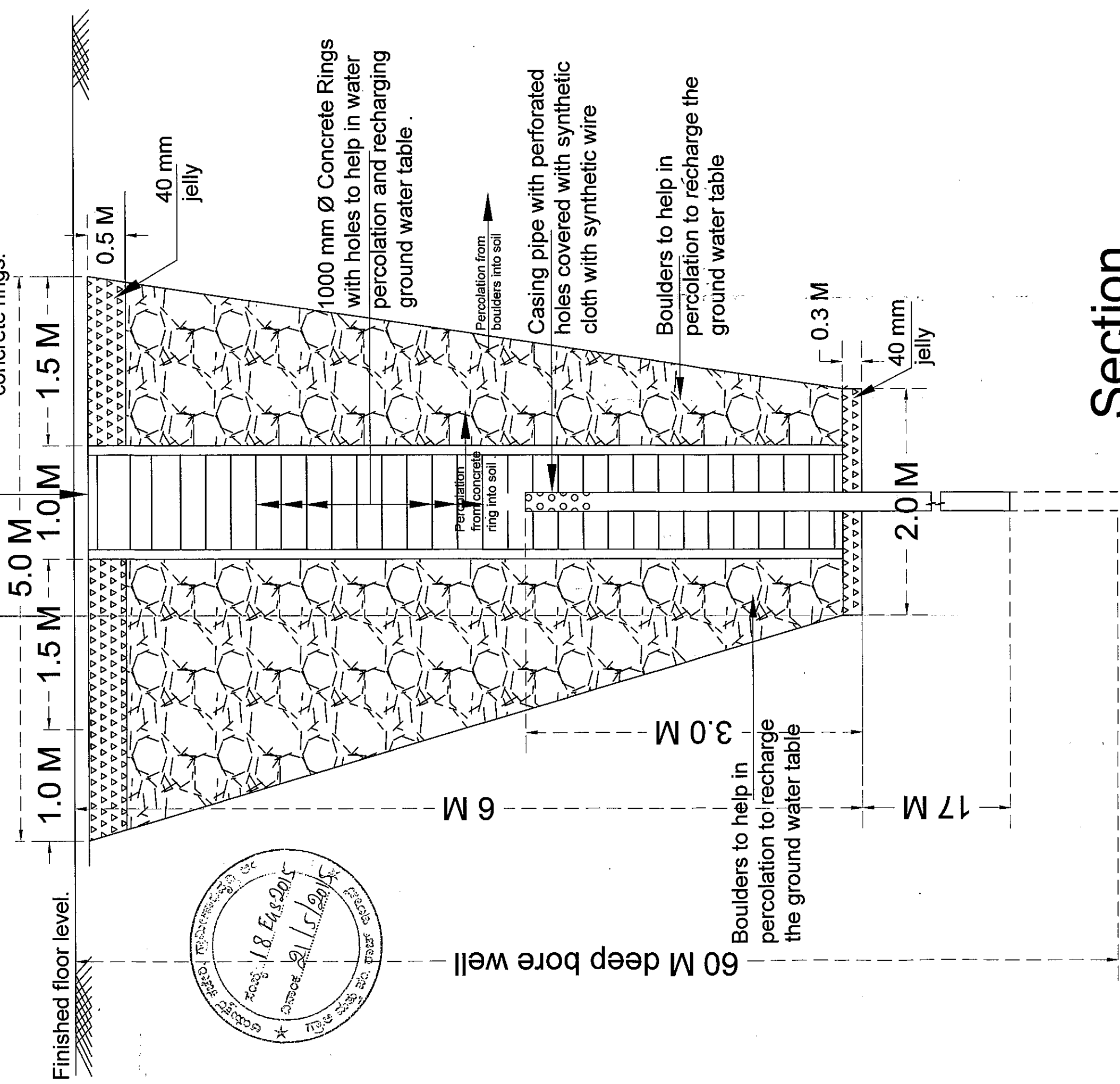
Injection Well



M.S Casing pipe

RCC Rings of 1000 mm \varnothing & 115 mm thick using 8 mm \varnothing rods

Plan



Section

