Revised Model Calculation as per BOCEs recommendations dated 23.03.2019
(Standarad Data 2015-16)

IRR-CCDW-2-21 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates with placing and sinking plums of size 150 to 80 mm upto 15 percent **for gravity type retaining walls / piers / abutments** etc., including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,**complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.765cum, Blending Ratio of CA--50:30:20, FA : 0.34 cum,
plums of size 150 to 80 mm : 0.25cum)

DATA:

RATE ANALYSIS UNIT : **18.09** cum

A. MATERIALS:

S No	Particulars	Unit	Quantity	Rate with Tax (Rs)	Amount with Tax (Rs)	Total Embedded Tax Rate (%)	(1 + (Tax rate/100))	Basic Rate (Col 5/Col 8) (Rs)	Embeded Tax (Col 5 - Col 9) (Rs)	Tax amount (Col 4 x Col 10) (Rs)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
1	Cement for mix	kg	4703.40	6.30	29631.42	28.81	1.2881	4.89	1.41	6631.79	Embedded taxes on Coarse aggregate is not considered
	Cement for incidentals @ 4 kg / cum	kg	72.36	6.30	455.87	28.81	1.2881	4.89	1.41	102.03	
2	Coarse aggregate 40-20 mm	cum	6.92	1145.00	7922.74	0.00	1.0000	1145.00	0.00	0.00	
	Coarse aggregate 20-10 mm	cum	4.15	1210.00	5023.50	0.00	1.0000	1210.00	0.00	0.00	
	Coarse aggregate 10 mm below	cum	2.77	875.00	2421.80	0.00	1.0000	875.00	0.00	0.00	
3	Plums of size 150 to 80 mm	cum	4.52	360.00	1628.10	0.00	1.0000	360.00	0.00	0.00	
4	Fine aggregate (Un-Screened)	cum	6.15	560.00	3444.34	5.00	1.0500	533.33	26.67	164.04	
5	Super Plasticizer	kg	18.81	95.00	1787.29	14.50	1.1450	82.97	12.03	226.33	
	Use rate of shuttering for 40 uses	sqm	49.75	225.53	11219.55	0.00	1.0000	225.53	0.00	0.00	
6	Scaffolding @ of shuttering	30%			3365.87	0.00	1.0000	0.00	0.00	0.00	
	Total cost of Materials			Rs:	**66900.48**	**Sub Total (A)**				**7124.19**	

S No	Particulars	Unit	Quantity	Rate with Tax (Rs)	Amount with Tax (Rs)	Total Embedded Tax Rate (%)	(1 + (Tax rate/100))	Basic Rate (Col 5/Col 8) (Rs)	Embeded Tax (Col 5 - Col 9) (Rs)	Tax amount (Col 4 x Col 10) (Rs)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
B. MACHINERY:											
1	Concrete mixer 300/200 ltr (diesel)	Hour	8.00	53.50	428.00	0.00	1.0000	53.50	0.00	0.00	Embedded taxes on hire charges of machinery **is not considered**
	Fuel / Energy charges	Hour	8.00	81.30	650.40	0.00	1.0000	81.30	0.00	0.00	
2	5 hp pump (diesel)	Hour	0.50	10.20	5.10	0.00	1.0000	10.20	0.00	0.00	
	Fuel / Energy charges	Hour	0.50	81.30	40.65	0.00	1.0000	81.30	0.00	0.00	
3	Needle vibrator 60 mm dia (petrol)	Hour	8.00	8.20	65.60	0.00	1.0000	8.20	0.00	0.00	
	Fuel / Energy charges	Hour	8.00	30.80	246.40	0.00	1.0000	30.80	0.00	0.00	
	Total hire charges of Machinery			Rs:	**1436.15**	**Sub Total (B)**				**0.00**	0.00
C. LABOUR:											
1	Crew for Concrete mixer	Hour	8.00	204.10	1632.80	0.00	1.00	204.10	0.00	0.00	
2	Crew for Pump	Hour	0.50	103.60	51.80	0.00	1.00	103.60	0.00	0.00	
3	Crew for Needle vibrator	Hour	8.00	146.90	1175.20	0.00	1.00	146.90	0.00	0.00	
4	Mason Class-I	Day	1.00	415.00	415.00	0.00	1.00	415.00	0.00	0.00	
5	work inspector	Day	1.00	400.00	400.00	0.00	1.00	400.00	0.00	0.00	
6	mazdoor						1.00	0.00			
	for batching materials	Day	11.00	310.00	3410.00	0.00	1.00	310.00	0.00	0.00	
	for loading mortar pans	Day	4.00	310.00	1240.00	0.00	1.00	310.00	0.00	0.00	
	for laying	Day	5.00	310.00	1550.00	0.00	1.00	310.00	0.00	0.00	
	for placing plums	Day	2.00	310.00	620.00	0.00	1.00	310.00	0.00	0.00	
	for conveying concrete	Day	15.38	310.00	4767.80	0.00	1.00	310.00	0.00	0.00	
	for conveying plums	Day	2.00	310.00	620.00	0.00	1.00	310.00	0.00	0.00	

S No	Particulars	Unit	Quantity	Rate with Tax (Rs)	Amount with Tax (Rs)	Total Embedded Tax Rate (%)	(1 + (Tax rate/100))	Basic Rate (Col 5/Col 8) (Rs)	Embeded Tax (Col 5 - Col 9) (Rs)	Tax amount (Col 4 x Col 10) (Rs)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12
	for cleaning/ washing/ curing	Day	1.00	310.00	310.00	0.00	1.00	310.00	0.00	0.00	
7	Labour for shuttering	sqm	49.75	79.80	3969.85	0.00	1.00	79.80	0.00	0.00	
	Labour for scaffolding @	30%			1190.96	0.00	1.00	0.00	0.00	0.00	
	Total cost of Labour			Rs:	21353.41	Sub Total (C)				0.00	

Total Tax amount **(A+B+C) =** **Rs 7124.19**

Embedded Taxes per Cum (E) **(A+B+C) /18.09 =** **Rs 393.82**

labour component/unit qty		1180.40
Add contractor's profit and overhead charges	0.13615	160.71
labour component/unit qty (including contractor's profit)		**1341.11**

ABSTRACT:

A. Cost of Materials		Rs:	66900.48
B. Hire charges of Machinery		Rs:	1436.15
C. Cost of Labour		Rs:	21353.41
	Total	Rs:	**89690.03**
D. Add for contractor's profit and overheads on (A+B+C)	13.615%	Rs:	12211.30
Total cost for	18.09 cum	Rs:	**101901.33**
Rate per cum	(A+B+C+D)/18.09	Rs.	5633.02

MACHINERY LEAD CHARGES:							Revised Lead/conveyance charges			Tax amount (Rs)	
Add: Lead Charges for Metal	121.10	8.00	Kms.	92.64			121.10	8.00 Km	92.64	0.00	As per revised lead charges
Add: Lead Charges for Sand	121.10	8.00	Kms.	41.17			121.10	8.00 Km	41.17	0.00	
Total Rate with embedded taxes				Rs 5766.83	per Cu m		Embedded Taxes in lead charges(F)			Rs 0.00	/Cu.m

Total Embedded taxes (E+F) **Rs 393.82 /Cu m**

Signature of Technical Sanctioning Authority

Sd/- 09.04.2019
Engineer-in-Chief (Irrigation)
Irrigation &CAD Department

Sd/- 09.04.2019
Engineer-in-Chief (AW)
Irrigation &CAD Department and
Chairman, Board of Chief Engineers

for Engineer-in-Chief (AW) 25/4

25/4/19