

Baron Albinus ad Stranabur

Schmidt XLV-700 No. 1345

17.17.03.5.Y-SC

Figure 1 consists of eight vertically stacked micrographs, labeled 1 through 8 on the right side. The images show the developmental stages of an embryo. Stage 1 is a single cell. Stage 2 shows a cell with a prominent nucleus. Stage 3 shows a cell with a more defined shape. Stage 4 shows a cell with a more complex internal structure. Stage 5 shows a cell with a more complex internal structure. Stage 6 shows a cell with a more complex internal structure. Stage 7 shows a cell with a more complex internal structure. Stage 8 shows a cell with a more complex internal structure.

GILHAIR P. V. D.

E.E. R.W.D. Aungmye **DIVISION**

AME BERRY
SUB-DIVISION

BARUN

WASINGTON DOT 160K

19/11/19

2677

Certified That This M.B. Contain (100)
Pages By Printers E. ... And Issued
To Sri. kameshwar p.d. ... R.W.D.
Work S. ... Div. Barun

Executive Engineer
Road Works Division, ...
Work S. ... Div. Barun
A. E. Barun
10/11/20

Schedule XLV - Form No. 134.

E.C.R.W.D. Aurangabad Div. Barun

A.E. Barun Div. Barun

MEASUREMENT BOOK.

211156 26771

Sri. kameshwar p.d.

Date of first entry A.E. Barun

Date of last entry

विज्ञापन विभाग, ...

Name of work -
 Situation of work -
 Agency by which work is executed -
 Date of measurement -
 No. and date of agreement.

(These four lines should be repeated at the conclusion of the measurements relating to each work.)

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Test 2 A/C Bill

Name of work - Construction of
 Road from Barun alabinagar
 Road to Shankarpur under
 Head Ministry

Name of Agency - Nirman
 Developers Shambhoo
 Nagar, Lucknow
 Aurangabad (Bihar)

Agreement No - 532/2019/21

Date of work start - 28.08.20

Date of completion - 27.08.20

Agreement value - 67,12,411/-

Date of measurement -
 15.09.20

1) Providing & fixing
 of working work bench rule.

Qty = 2.0 Nos.

2) Reference pillar.

Qty = 4.0 Nos.

3) Cleaning & grubbing

Road level -

both sides

2 x 15 Nos x 30.0' x 3.50 = 3150.0 m²

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
$BF = 014 = 3150.0m^2$					
$2 \times 15 No \times 30.0 \times 3.50 = 3150.0m^2$					
$2 \times 1 No \times 30.0 \times 3.50 = 210.0m^2$					
$2 \times 1 No \times 20.0 \times 3.50 = 140.0m^2$					
$2 \times 3 No \times 30.0 \times 3.50 = 630.0m^2$					
$2 \times 1 No \times 20.0 \times 3.50 = 70.0m^2$					
Total = 7350.0m ²					

$$Qty = 0.735 HCL$$

Ranjan
15-09-20
J.R.

Date of measurement
28-09-20

④ Dismantling & existing

structure like culvert

For signal row bridge

Summed H.P.C

P.C.C = $2 \times 3.50 \times 1.54 \times 0.150 = 1.62 m^3$

② Dismantling of existing brick

$2 \times 2 \times 6.20 \times 0.825 \times 3.0 = 61.38 m^3$

③ H.P. dismantling

$2 \times 5.0 = 10 m$

Ranjan
28-09-20
J.R.

Continuation

Particulars	Details of actual measurement				Contents of area
	No	L	B	D	

Date of measurement

03-10-20

H.P. - 600mm ϕ

at CH-

(31) Earth work in excavation

for foundation of structure

up to 8.0m depth as per

- Do - - Do - -

H.Wall.

$$2 \text{ No} \times 3.90 \times 1.150 \times 1.50 = 13.455 \text{ m}^3$$

Below pipe

$$1 \text{ No} \times 5.35 \times 1.130 \times 0.365 = 2.207 \text{ m}^3$$

$$\text{Total} = 15.66 \text{ m}^3$$

(32)

Providing 15 P.C.C.

(1.25:5) as per

Course - - Do - -

H.Wall-

$$2 \times 3.90 \times 1.15 \times 0.150 = 1.34 \text{ m}^3$$

Below pipe-

$$1 \times 5.311 \times 1.130 \times 0.250 = 1.507 \text{ m}^3$$

$$= 2.85 \text{ m}^3$$

(33)

P.C.C in sub

Structure - - - - -

H.Wall-

$$2 \text{ No} \times 3.60 \times (1.0 + 0.40) \times 2.78 = 14.0 \text{ m}^3$$

P.C.C. in sub

$$2 \text{ No} \times 3.60 \times 0.40 \times 0.60 = 1.728 \text{ m}^3$$

Less for pipe-

$$2 \times 1.1 \times 0.8809 \times 0.530 = 0.574 \text{ m}^3$$

Continuation

$$= 15.17 \text{ m}^3$$

Particulars	Details of actual measurements				Contents of area
	No.	L	B	D	
(4/34) Providing & Laying R.C.C. N.P. 3 for Culvert - - - - - 3 x 7.50 = 7.50m					

Ranjan
08-10-20
J.E.

Date of measurement
09-10-20

H.P. - 1000 mm
at CH -

36 Earthwork in excavation.
for foundation of stanchion.
- at CH -
Head wall -
 $2 \text{ No} \times 6.45 \times 1.40 \times 1.50 = 27.09 \text{ m}^3$
Below pipe -
 $1 \times 4.850 \times 1.53 \times 0.365 = 2.70 \text{ m}^3$
 $= 29.80 \text{ m}^3$

(2/37) Providing m.s (1:2:5:5)
as leveling course -
- - - - -
H.W. $2 \times 6.4500 \times 1.40 \times 0.150 = 2.70 \text{ m}^3$
Below pipe.
 $1 \times 4.931 \times 1.530 \times 0.250 = 1.88 \text{ m}^3$
 $= 4.58 \text{ m}^3$

Confirmation
Ranjan
09-10-20
J.E.

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
(3) P.C.C. Mass concrete.					
of concrete - - - -					
H.W. - 2 x 6.15 x (1.25 + 0.40) x 180					
				2	= 32.26 m ³

Parapet -					
2 No x 6.15 x 0.40 x 0.60 = 2.95 m ³					
less for pipe -					
2 No x $\frac{\pi}{4} \times (1.230)^2 \times 0.622$ = 1.47 m ³					
					= 33.74 m ³

(4) Providing and laying					
R.C.C. A/P-3 for					
Culvert - - - -					
3 No x 2.50 = 7.50 m					

Remarks
12.10.20
J.B.

Date of measurement -					
H.P. - 100 mm catch -					
(1) Earth work in					
Excavation - - - -					
at the Headwall					
2 No x 6.45 x 1.40 x 1.50 = 27.09 m ³					
Below Pipe -					
1 x 4.850 x 1.53 x 0.365 = 2.70 m ³					
					= 29.80 m ³

Continuation

Particulars	Details of actual measurement				Contents of area
	No	L	B	D	
② Providing A.C. MIS (1:2:5) for leveling.					
- - - - -					
H.W. - 2 x 6.45 x 1.40 x 0.150 = 2.70m ³					
Below Pipe					

1 No x 4.931 x 1.53 x 0.250 = 1.88m ³					
Down					4.58m ³

③ P.C.C (M20) grade.					
③ of conc. in sub structure					
- - - - -					
H.W. - 2 No x 6.15 x (1.25 + 0.40) x 3.18					
					= 32.26m ³

Pair of feet					
2 No x 6.15 x 0.40 x 0.60 = 2.95m ³					

Less for pipe					
2 No x $\frac{\pi}{4} \times (1.230)^2 \times 0.622 = 1.47$					
					= 33.74m ³

④ Providing & Laying					
R.C.C pipe N.R. 3 for					
culvert - - - - -					
3 No x 2.50 = 7.50m					

18.10.20					
JTS					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Date of measurement -

to H.P. Cement - 1000 mm

CH -

(1) Earth work in excavation.
36 in foundation - -

- - - - -

H.H. -

$$2 \text{ No } \times 6.45 \times 1.40 \times 1.50 = 27.0 \text{ m}^3$$

Below pipe -

$$1 \text{ No } \times 4.95 \times 1.530 \times 0.365 = 2.70 \text{ m}^3$$

$$= 29.80 \text{ m}^3$$

(2) Providing M15 P.C.C.
37 (1:2:5) as leveling

Course - in foundation.

- - - - -

$$\text{H.H. } 2 \times 6.450 \times 1.40 \times 1.50 = 27.0 \text{ m}^3$$

Below pipe -

$$1 \times 4.931 \times 1.530 \times 0.250 = 1.88 \text{ m}^3$$

$$= 4.58 \text{ m}^3$$

Ramp - 20

(3) P.C.C. M20 grade.
38 of concrete - - - - -

H.H. -

$$2 \text{ No } \times 6.15 \times \frac{(1.25 + 0.40)}{2} \times 3.18 = 32.26 \text{ m}^3$$

Parapet -

$$2 \times 6.150 \times 0.40 \times 0.60 = 2.95 \text{ m}^3$$

Less for pipe -

$$2 \times \frac{\pi}{4} \times (1.230)^2 \times 0.622 = 1.478 \text{ m}^3$$

Continuation

$$= 33.74 \text{ m}^3$$

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
④ ③⑤ Providing and laying R.C. pipe 150 for --- duct 3 No x 2.50 = 7.50m					
Ramji 28.10.20 J.E.					
① ③⑥ Providing and laying of reinforced cement concrete pipe duct 200 2 x 4 No x 2.50 = 20.0m					
② ④ Box cutting - Provision for Road way in soil using --- both sides. In BT Particular - CH. no. to 450.0m 2 x 15 No x 30.0 x 0.375 x 100 = F 47.25 m ³					
In P.C.C Particular 2 x 20 No x 30.0 x 0.375 x 100 = 45.0 m ³					
Total = 92.25 m ³					

Continuation

Ramji
28.10.20
J.E.

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Date of measurement
02-11-20

① Construction of Embankment

with materials - 50% - 50%

60% of Excavated

materials - 50% - 50%

$$60\% \times 92.25 = 55.35 \text{ m}^3$$

② Construction of Subgrade and Earth shoulder

50% - 50%

Adjunct of L.S. of (in BT) RMB

$$2 \times 15 \text{ No} \times 30.0 \times \frac{(1.50 + 1.30)}{2} \times 0.210$$

$$= 77.625$$

$$= 252.0 \text{ m}^3$$

Adjunct of WBM m³

$$2 \times 15 \text{ No} \times 30.0 \times \frac{(1.30 + 1.0)}{2} \times 0.075$$

$$= 77.625 \text{ m}^3$$

$$= 329.625 \text{ m}^3$$

③ For 100 m lead = 110.10 m³

④ For 100 m lead = 219.52 m³

Ranjan

02-11-20

J.H.

Bm

B.

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Date of measurement
05/11/20

(1) U.S.B. with well
to graded material.
for grading - I

For D.O. -
U.S.B. in widening. Put in

$$2 \times 15 \times 30.0 \times 0.05 \times 0.100 = 47.25 \text{ m}^3$$

U.S.B. over highway
at ch-0.00 m to 15.0 m

$$1/2 \times 15.0 \times (2.70 + 4.05) \times 0.100 = 9.5625 \text{ m}^3$$

$$14 \times 30.0 \times 0.05 \times 0.100 = 21.0 \text{ m}^3$$

$$1/2 \times 15.0 \times 4.05 \times 0.100 = 6.075 \text{ m}^3$$

Extra for Pot. Refuse

Extra Profile = 157.8

$$= 15 \times 30.0 \times 3.0 \times 0.100 \times 157.8 = 20.25 \text{ m}^3$$

U.S.B. In C.C. Portion in Ch-0.00 m to 6.00 m

U.S.B. in widening -

$$2 \times 20 \times 30.0 \times 0.05 \times 0.100 = 4.0 \text{ m}^3$$

Extra in Y Junction -

$$10.0 \times (6.0 - 4.05) \times 0.100 = 0.975 \text{ m}^3$$

Right -

$$10.0 \times (6.0 - 4.05) \times 0.100 = 0.975 \text{ m}^3$$

Left -

$$14.0 \times (5.10 - 4.05) \times 0.100 = 0.735 \text{ m}^3$$

Extra correction Profile =

$$60.0 \times 3.0 \times 0.100 \times 157.8 = 27.0 \text{ m}^3$$

$$= 327.922 \text{ m}^3$$

$$0.91170 \times 327.922 = 327.24 \text{ m}^3$$

JE

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Date of measurement
15-11-20

(+) providing, laying,
(1) Spreading, and working
Comp. ... 20-20

In BT Portion CH-0.0 to 450m

$$1 \text{ No} \times 15.0 \times \frac{(3.70 + 3.75)}{2} \times 0.075 = 7.00 \text{ m}^3$$

$$14 \text{ No} \times 30.0 \times 3.75 \times 0.075 = 118.125 \text{ m}^3$$

$$1 \text{ No} \times 15.0 \times 3.75 \times 0.075 = 4.21 \text{ m}^3$$

In C.C Portion
CH-450 to 1050m

$$20 \text{ No} \times 30.0 \times 3.75 \times 0.075 = 168.75 \text{ m}^3$$

For Junction

$$\text{Left} \quad \frac{10.0 \times (6.0 - 3.75) + 0.0}{2} \times 0.075 = 0.843 \text{ m}^3$$

Right

$$\frac{10.0 \times (6.0 - 3.75) + 0.0}{2} \times 0.075 = 0.843 \text{ m}^3$$

Curve

$$14.0 \times \frac{(5.10 - 3.75) + 0.0}{2} \times 0.075 = 1.416 \text{ m}^3$$

$$= 301.18 \text{ m}^3$$

Received
15-11-20

JG

Continuation

15-11-2021
H. B. B. B.

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Date of mesurmt

28-11-20

① P.C.C.

18 construction of P.C.C

M30 grade

2" - 2" - 11" thick

(H-450 to 1050mm)

$$20.00 \times 3.00 \times 3.75 \times 0.160 = 360.00 \text{ m}^3$$

for: extra width

$$\frac{10.00 \times (6.00 - 3.75) + 0.00}{2} \times 0.160 = 1.80 \text{ m}^3$$

Right

$$10.00 \times (6.00 - 3.75) + 0.00 \times 0.160$$

$$2 = 1.80 \text{ m}^3$$

for: extra

$$14.00 \times (6.00 - 3.75) + 0.00 \times 0.160$$

$$2 = 1.80 \text{ m}^3$$

$$= 3.924 \text{ m}^3$$

$$= 367.524 \text{ m}^3$$

$$\text{Qty limit of H} = 367.20 \text{ m}^3$$

Received
28-11-20
J. K.

28-11-2020
K. K. Boruah

Particulars	Details of actual measurement				Contents of shed
	No.	L	B	D	

Date of measurement
04-12-20

(1/6.7) Construction of
Embankment with
approved material.

As per growth

Height	Area	Average mean Area	Length	Volume
0.00	4.975	—	—	—
50.0	4.880	4.927	50	246.35 m ³
100.0	5.109	5.689	50	251.97 m ³
150.0	5.251	5.225	50	261.25 m ³
200.0	5.010	5.130	50	256.52 m ³
250.0	5.037	5.027	50	251.77 m ³
300.0	4.936	4.986	50	249.22 m ³
350.0	4.870	4.903	50	245.15 m ³
400.0	4.450	4.66	50	233.0 m ³
450.0	5.030	4.74	50	237.0 m ³
500.0	4.800	4.915	50	245.75 m ³
550.0	3.660	4.23	50	211.50 m ³
600.0	4.500	4.08	50	204.0 m ³
650.0	4.280	4.365	50	218.25 m ³
700.0	3.70	3.965	50	198.25 m ³
750.0	3.510	3.605	50	180.25 m ³
800.0	3.790	3.650	50	182.50 m ³
850.0	4.819	4.304	50	215.22 m ³
900.0	4.71	4.764	50	238.22 m ³
950.0	3.750	4.23	50	211.50 m ³
1000.0	3.750	3.75	50	187.50 m ³
1050.0	5.250	4.50	50	225.0 m ³

Continuation

Total = 4695.685
Total = 4629.685 m³

$$BF = qty = 4629.685 m^3$$

Sch. XLV-Form No. 134

14

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	

$$\text{Total qty} = 4629.685 m^3$$

Deduction qty.

$$(1) \text{ R.C. C. qty} = 367.20 m^3$$

$$(2) \text{ W.B.M. qty} = 301.18 m^3$$

$$(3) \text{ L.S.B. qty} = 327.24 m^3$$

$$(4) \text{ Sub grade} = 329.625 m^3$$

(5) embed materials.

$$\text{Form Box cutting} = 55.35 m^3$$

$$\text{Net qty} = 3249.09 m^3$$

$$\text{① For 1000 m (each) qty} = 1724.10 m^3$$

$$\text{② For 100 m (each) qty} = 1524.99 m^3$$

Ranjan

09-12-20

JR B.

07.01.2020

For B.M.D.

Particulars	Details of actual measurement				Comments of area
	No.	L	B	D	

ABSTRACT OF COST.

① Providing & fixing

Working bench mark -

- 10 - 10 -

Qty wide tmd P-1 = 2.0

@ RS = 3787.56/Each = RS = 7575.120

② Reference Pillar

Qty wide tmd P-1 = 4.0

@ RS = 1713.77/Each = RS = 6855.200

③ Cleaning & leveling

Road Canal

Qty wide tmd P-2 = 0.735 Hec

@ RS = 5113.76/Hec = RS = 37583.00

④ Box cutting

Excavation for Roadway

In Soil - 10 - 10 -

Qty wide tmd P-8 = 9225 m³@ RS = 74.16/m³ = RS = 68415.00

⑤ Construction of Embankment

material available

For Box cutting

Qty wide tmd P-9 = 55.35 m³@ RS = 26.11/m³ = RS = 1445.00

Total RS = 60299.00

Continuation

Particulars	Details of actual measurement				Conversion of area
	No.	L	B	D	

$$BF = PS = 60,299.20$$

⑥ Construction of Embankment
for 1000 m (canal)

$$Qty \text{ wide } Tm \text{ } P-14 = 1724.10 m^3$$

$$@ PS = 174.34 / m^3 = PS = 301,614.20$$

⑦ Construction of Embankment
with upper

material

for 1000 m (canal)

$$Qty \text{ wide } Tm \text{ } P-14 = 1524.93 m^3$$

$$@ PS = 181.03 / m^3 = PS = 275,819.20$$

⑧ Construction of Subgrade

for 1000 m (canal)

$$Qty \text{ wide } Tm \text{ } P-9 = 110.16 m^3$$

$$@ PS = 176.56 / m^3 = PS = 19,441.20$$

⑨ Construction of Subgrade
for 1000 m (canal)

$$Qty \text{ wide } Tm \text{ } P-9 = 219.52 m^3$$

$$@ PS = 141.17 / m^3 = PS = 30,990.20$$

⑩ Cr. S. B. With well
graded, gravelly
materials

$$Qty \text{ wide } Tm \text{ } P-10 = 827.24 m^3$$

$$@ PS = 2398.79 / m^3 = PS = 1,984,980.20$$

Continuation

$$Co. PS = 13,97,143.20$$

Bf 128:139714300

Sch. XLV-Form No. 134 17

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
11/11 L.B.M. Item-3, Providing laying, spreading & compacting - - - - - Qty water trap P-11 = 30.18 m ³ @ P1 = 3730.43 / m ³ = 1123530 = 00					

12/15 Construction of P.C. mga grade - - - - - - - - - - Qty water trap P-12 = 367.20 m ³ @ P2 = 5929.75 / m ³ = 2177404 = 00					
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13/20 Irrigation Pipe - Providing & laying of - - - - - Qty water trap P-8 = 20.0 m ³ @ P3 = 859.75 / m ³ = 17195 = 00					
--	--	--	--	--	--

14/25 Earth work in excavation for foundation - - - - - Qty water trap P-3 = 15.66 m ³ Qty water trap P-4 = 23.80 m ³ Qty water trap P-5 = 23.80 m ³ Qty water trap P-7 = 23.80 m ³ = 105.06 m ³					
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@ P3 = 269.32 / m ³ = 28295 = 00					
---	--	--	--	--	--

15/32 Providing M15 P.C. in leveling - - - - - Qty water trap P-3 = 2.89 m ³ Qty water trap P-4 = 4.56 m ³ Qty = 6.93 m ³ @ P3 = 4743567 = 00					
---	--	--	--	--	--

$$BF = P1 = 47,43,567 = \infty$$

Sch. XLV-Form No. 134

18

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

$$BF = P1 = 6.93m^3$$

$$Qty \text{ wire temp } P-6 = 4.58m^3$$

$$Qty \text{ wire temp } P-7 = 4.58m^3$$

$$= 16.09m^3$$

$$QPS = 4620.32/m^3 = P1 = 74,486 = \infty$$

16 P.C.C. M20 in

33 Substructure

$$Qty \text{ wire temp } P-3 = 15.19m^3$$

$$Qty \text{ wire temp } P-5 = 33.74m^3$$

$$Qty \text{ wire temp } P-6 = 33.74m^3$$

$$Qty \text{ wire temp } P-7 = 33.74m^3$$

$$= 116.45m^3$$

$$QPS = 25425.94/m^3 = P1 = 63,152 = \infty$$

17 Providing & laying

34 NP-3 pipe for

H.P.C. - 100mm ϕ

$$Qty \text{ wire temp } P-4 = 7.50m$$

$$QPS = 926.92/m^3 = P1 = 6951 = \infty$$

18 Providing & laying

37 NP-3 pipe for

H.P.C. - 100mm ϕ

$$Qty \text{ wire temp } P-5 = 7.50m$$

$$Qty \text{ wire temp } P-6 = 7.50m$$

$$Qty \text{ wire temp } P-7 = 7.50m$$

$$= 22.50m$$

$$QPS = 3530.38/m^3 = P1 = 79,434 = \infty$$

$$QPS = 55,35,963 = \infty$$

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

$$BF = PS = 55,35,963 = \infty$$

(19) Dismantling of

(41) Existing Structure

Cement concrete

$$\text{Qty Wt. temp} P-2 = 1.62 \text{ m}^3$$

$$@ PS = 4184.74 / \text{m}^3 = PS = 7852 = \infty$$

(20) Dismantling of Existing
(42) for Structure

Cement mortar

$$\text{Qty Wt. temp} P-2 = 61.36 \text{ m}^3$$

$$@ PS = 231.77 / \text{m}^3 = PS = 14,226 = \infty$$

(21) Removing all

(43) Types Hume p/p

$$\text{Qty Wt. temp} P-2 = 10.0 \text{ m}$$

$$@ PS = 236.34 / \text{m} = PS = 2363 = \infty$$

$$\text{Gr - Total} = 55,53,337 = \infty$$

$$\text{Add } 12\% \text{ in S.T.} = 666,400 = \infty$$

$$\text{Add } 1\% \text{ Labourless} = 55,533 = \infty$$

$$\text{Total} = 62,75,270 = \infty$$

$$\text{Less } 10\% \text{ below} = 6,27,527 = \infty$$

$$\text{Net PS} = 56,47,743 = \infty$$

Rampy

21-12-20

J.E.

Continuation

Sch. XLV-Form No. 134 **20**

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	

Materials STATEMENT.

- (1) Stone metrel = 639.30 m^3
- (2) coarse sand = 348.17 m^3
- (3) Stone Screening = 72.28 m^3
- (4) Aggregate (Stone chips) = 105.18 m^3

Ramji

21-12-20

C&P

21/12

07.01.21

1100, BATH