

कार्यपालक अभियंता का कार्यालय
ग्रामीण कार्य विभाग, कार्य प्रमंडल, मधुबनी।

पत्रांक:- 2594 330

दिनांक:- 23-09-2020

देवरा,

कार्यपालक अभियंता
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, मधुबनी।

सजा में

नोडल पदाधिकारी,
एम0आर0 '3054
अनुरक्षण एवं मरम्मत कोषांग,
ग्रामीण कार्य विभाग,
बिहार, पटना।

वि. 4.-

शीर्ष 3054 अंतर्गत बिहार ग्रामीण पथ अनुरक्षण नीति-2018 के तहत स्वीकृत कार्यों के आवंटन की मांग हेतु अध्याचना के संबंध में।

प्रति -

भवदीय पत्रांक 113 अनु0 पटना दिनांक 10.01.2020

महाशय,

उपरोक्त विषयक प्रासंगिक पत्र के अनुपालन में शीर्ष 3054 अंतर्गत बिहार ग्रामीण पथ अनुरक्षण नीति-2018 से संबंधित पथ में आवंटन की मांग की गयी है। वांछित विवरणी विहित प्रपत्र में तैयार कर आवश्यक कार्रवाई हेतु समर्पित की जाती है।

अतः श्रीमान् से अनुरोध है कि उक्त पथ में आवंटन उपलब्ध कराने की कृपा की जाय ताकि स-समय भुगतान किया जा सके।
अनु- यथोक्त।

विश्वासभाजन

 23.9.20

कार्यपालक अभियंता

ग्रा0का0वि0, कार्य प्रमंडल, मधुबनी।

23.9.20

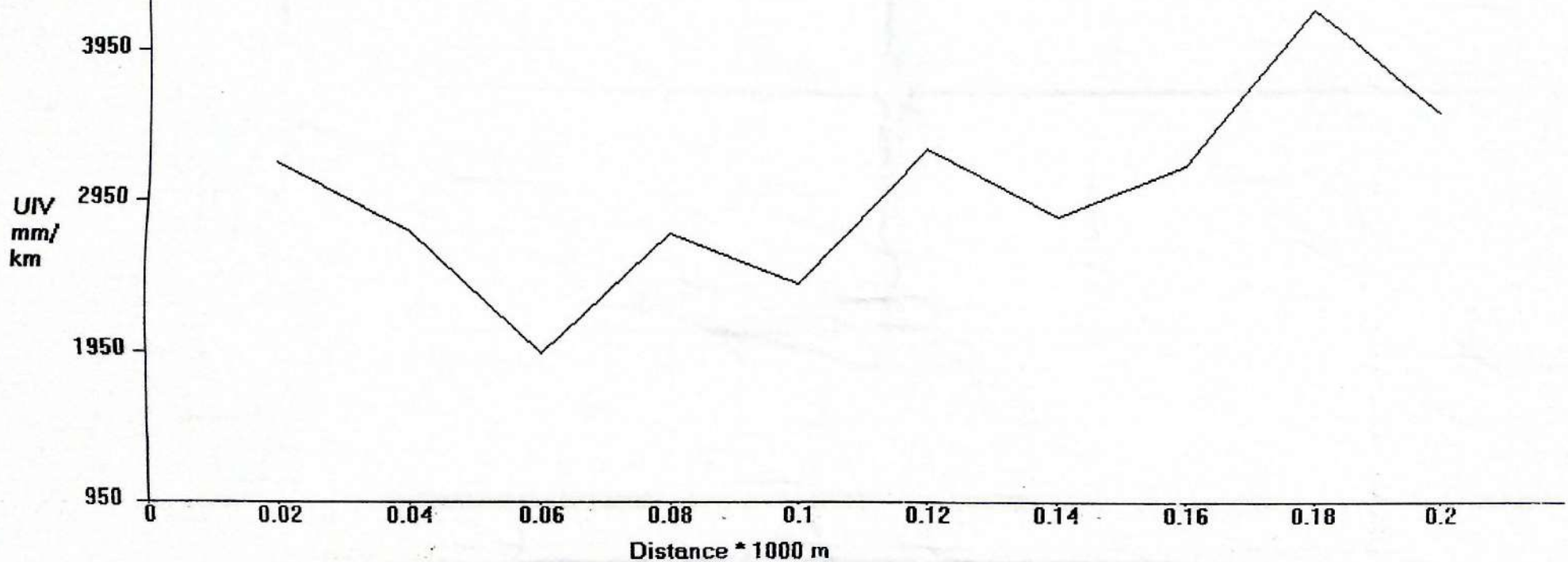
RWD, Works Division, Madhubani
Requisition Format for Scheme Head- MR (3054) under Bihar Rural Road Maintenance Policy-2018 (Initial Rectification and Surface Renewal)

Name of Works Division:-RWD, (W) Division, Madhubani																		
Sl No	Package No	Name of Road	Project ID as per MIS	Administrative Approval (AA) Letter No & Date	Administrative Approval (AA)		Agreement Amount (in Lakh)		Agreement No & Date	Date of Completion as per Agreement	Actual Date of Completion	Value of IRI (in mm/km)	Thickness of Bitumen Layer (in mm)	Value of Bitumen Content in Percentage	Previous Total Allotted Amount (in Lakhs)	Up-to-date Expenditure as per MIS (in Lakh)	Requisition against work done (in Lakh)	Remarks
					Length (in KM)	amount (in Lakh)	Initial Rectification With Surface Renewal (in Lakh)	5 Year Routine Maintenance (in Lakh)										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	M/R-N-2019-20-Madhubani-13	Jaldhari Chowk to Ranti Road	319961036044	Lt No-5984 Dt-30.10.19	2.00	87.16000	157.75974	20.00467	50MBD/ 2019-20	22.10.2020	Work in Progress							
2		Subhash Chowk to Kasiyauna road	319961036043		1.00	58.33000	53.43228	8.27679					Road Furniture Work in Progress	379.6	18mm Only PCC provision in Total Length (1.00 KM)	0	0	0


 कार्यपालक अभियंता,
 ग्रामीण कार्य विभाग, कार्य प्रमंडल, मधुबनी
Apekh
23.9.20

File :C:\Users\BRRDA107\Desktop\bomp\19091409 (1).Xls, Section No. :67, Eqn : $Y = 0 * X^2 + 1.136 * X + 132.5$

Name of Customer :M/S Om Construction, Name of Work/ Road :subhash chowk to kashiyuana, Lab Job number :



Executive Engineer,
R.W.D., Works Division
Madhubani

19/09/20
J.E

19/09/20
AE

RS
19/09/2020
(M.T.M)

Road Name:- Subhash chowk to kashiyuana

Contractor Name:- M/S Om Construction

Date	Time	Section No.	Length in km	Bumps in mm	Speed Rate	OR	IRI, TEGORY	Latitude	ongitude	Event
19/9/20	14:5:0	67	0.04	370	10.1	1200	3896 G	26.41012	86.15766	Normal
19/9/20	14:5:28	67	0.1	270	10.1	2700	3694 G	26.40925	86.15749	Normal
19/9/20	14:5:28	67	0.1	380	10.1	3800	3986 G	26.40835	86.15731	Normal
19/9/20	14:6:3	67	0.1	270	20.2	2700	3592 G	26.40747	86.15729	Normal
19/9/20	14:6:3	67	0.1	310	20.2	3100	3686 G	26.40655	86.15742	Normal
19/9/20	14:7:0	67	0.1	320	10.1	3200	3795 G	26.40565	86.15749	Normal
19/9/20	14:7:14	67	0.1	230	10.1	2300	3592 G	26.40472	86.15741	Normal
19/9/20	14:7:49	67	0.1	280	10.1	2800	3465 G	26.40383	86.15727	Normal
19/9/20	14:8:0	67	0.1	330	20.2	3300	3950 G	26.40295	86.1571	Normal
19/9/20	14:8:24	67	0.1	300	10.1	3000	3540 G	26.40207	86.15685	Normal

TOTAL IRI = 3719.6

$$Y = 0 * X^2 + 1.136 * X + 132.5$$

$$X = 7200$$

$$Y = 8311$$

(R) RURAL ROAD

Good Average Poor
<4000 4001-5000 >5001

[Signature]
19/9/2020

[Signature]
19/9/2020
J.E

[Signature]
20/9/2020
J.E

Executive Engineer,
R.W.D., Works Division
Madhubani

**REPORT ON
CONCRETE MIX DESIGN (M-30)**

FOR THE PROPOSED

Construction of Road from " Subhash Chowk to Kasiyauna Road "

Under M/R-3054

DISTRICT- MADHUBANI, STATE- BIHAR

SUBMITTED TO:

**EXECUTIVE ENGINEER
R.W.D WORKS DIVISION, MADHUBANI**

AGENCY:

**M/s Om Construction
Prop- Om Namo Narayan
At-Ram Chowk, Bhowara,
P.S & District- Madhubani**



TESTING DONE BY

OM SAI CONSULTANTS

(AN ISO 9001:2015 & ISO/IEC 17025: 2017 CERTIFIED, NABL ACCREDITED LAB)
Office- Bank of India Colony, Near Jai Shree Gas Godown, South D/SS, P.O.-B.V. College Raja Bazaar,
Patna-800014, Mob+919471008668. IGST No:-10BZIPP5858H224, PAN No:-BZIPP5858H
Email- admin@omsaiconsultants.com, Gmail- omsaiconsultantspatna@gmail.com

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Mix Design of M - 30

(With Super Plasticizer)

OM SAI CONSULTANTS
(AN ISO 9001:2015 & ISO/IEC 17025:2017 CERTIFIED, NABL ACCREDITED LAB)
GEOTECHNICAL, MATERIALS TESTINGS, SURVEY, DPR, ERT & NDT
www.omsaiconsultantsandlaboratory.com
---CONCRETE MIX DESIGN---

Report No: OSC/MIX/210320/08	Date of Receiving: 18.02.2020
Job Description: Concrete Mix Design M-30 with O.P.C 43 Grade	Date of Testing: 18.02.2020 TO 21.03.2020
Letter No: Nill	Date of Reporting: 21.03.2020

1 PROTOCOL IS 10262 2009 & SP-23 GUIDELINE & MORTH

The method of concrete mix design consists of selection of optimum proportion of water, cement, fine/coarse aggregate & admixture to produce concrete of specified properties most economically. The proportion of concrete mix is obtained experimentally evolved relationship between the factors in the choice of mix design.

It provides reasonably accurate guide to arrive at an optimum proportion of ingredients. The final mix proportion is obtained on the basis of trial mix. The mix design has been carried out as per IS 10262 guideline keeping in the view. The recommended mix design deviation and targeted mean strength. The recommended mix proportion should be tested at site their workability and strength.

1	Grade of Concrete	M-30
2	Characteristic Strength At 28 Days, N/mm ²	30.0 N/mm ²
3	Targeted Strength At 28 Days, N/mm ²	38.25 N/mm ²
4	Degree of Quality Control	Good
5	Exposure Condition	Severe
6	Degree of workability	0.9 Compating Factor
7	Slump Required	(75-100) mm
8	Nominal Size of Aggregate	20 mm
9	Type of Cement	O.P.C - 43 grade
10	Minimum Cement Content	320 kg/m ³
11	Admixture Type	Plasticizer

2 Test data of materials

- (i) Cement used OPC (43 Grade) 3.15
- (a) Specific gravity of cement 2.72
- (ii) Specific gravity of coarse aggregate 2.68
- (iii) Specific gravity of sand 0.60 %
- (iv) Water absorption of coarse aggregate 1.20 %
- (v) Water absorption of sand
- (vi) Sieve analysis of coarse aggregate Mirzachauki

Table 1 (Single-Sized Aggregate of Nominal size 20 mm)
Wt.-10.00 kg Total 10000 gm

Sieve (mm)	Wt. Retained (gm)	Cumulative wt. Retained (gm)	Retained %	% passing	As per IS-383 (% passing)
		0	0	100	100
40	0	492	4.92	95.08	85-100
20	492	8316	83.16	16.84	0-20
10	7824	9678	96.78	3.22	0-5
4.75	1362	10000	100	-	-
Pan	322				



Table 2 (Single-Sized Aggregate of Nominal size 10 mm)
10 mm wt - 10.00 kg

Sieve (mm)	Wt. Retained (gm)	Cumulative wt. Retained (gm)	Retained %	Total % passing	10000 gm As per IS-383 (% passing)
20	0	0	0	100	100
12.5	0	0	0	100	100
10	515	515	5.15	94.85	85-100
4.75	7862	8377	83.77	16.23	0-20
2.36	1265	9642	96.42	3.58	0-5
Pan	358	10000	100	-	-

Table 3 (Graded Aggregate of Nominal size 20 mm)
(After mixing 20 mm single- Sized (60%) and 10 mm single- sized (40%) Aggregate

Sieve (mm)	Wt. Retained (gm)	Cumulative wt. Retained (gm)	Retained %	Total % passing	10000 gm As per IS-383 (% passing)
40	0	0	0	100	100
20	295	295	2.95	97.05	95-100
10	4900	5195	51.95	48.05	25-55
4.75	3962	9157	91.57	8.43	0-10
Pan	843	10000	100.00	-	-

Conforms Is 383 for 20 mm graded chips.

(vii) Sieve analysis of sand Kiul

Table 4 SAND TAKEN 2000 gm

Sieve (mm)	Wt. Retained (gm)	Cumulative wt. Retained (gm)	Retained %	% passing	As per IS-383 % passing for			
					Gr. Zone I	Gr. Zone II	Gr. Zone III	Gr. Zone IV
10	0	0	0	100	100	100	100	100
4.75	82	82	4.1	95.9	90 - 100	90 - 100	90-100	95 - 100
2.36	186	268	13.4	86.6	60 - 95	75 - 100	85-100	95 - 100
1.18	204	472	23.6	76.4	30 - 70	55 - 90	75-100	90 - 100
0.6	295	767	38.4	61.65	15 - 34	35 - 59	60-79	80 - 100
0.3	660	1427	71.4	28.65	5 - 20	8 - 30	12-40	15 - 50
0.15	528	1955	97.8	2.25	0 - 10	0 - 10	0-10	0 - 15
Pan	45	2000	100.0	0	-	-	-	-

Finess Modulus of Sand = 2.49

Hence conforms to zone III of IS - 383

3 Target mean strength concrete :

For quality control and M - concrete
Standard Deviation as per table - 1 of IS-10262 - 2009 = 5

So for M -
Target mean strength f_{ck}

$$f_{ck} + 1.65 \times S$$

$$30 + 1.65 \times 5$$

$$\text{Say } 38 \text{ N / mm}^2$$

$$38.25 \text{ N / mm}^2$$

4 Selection of Water Cement Ratio

From fig. 1 of IS 10262

For target mean strength of 38 N/mm²

IS 456 Maximum Water Cement Ratio

Water cement ratio =

0.45
0.410



पत्रांक :- 786 (अनु०)

प्रयोग/दर्शना/दिनांक - 14.9.2020

प्रेषक,

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
क्षेत्रीय प्रयोगशाला, दरभंगा।

सेवा में,

.....कार्यपालक अभियंता
.....ग्रामीण कार्य विभाग
.....क्षेत्रीय प्रयोगशाला, दरभंगा

विषय :- गुणवत्ता जाँच प्रतिवेदन समर्पित करने के संबंध में।

प्रसंग :- आपका पत्रांक $\frac{40}{12-6-2020}$ / $\frac{60}{12-8-2020}$ (अनु०) (रानगा).....

महाशय,

उपर्युक्त विषयक संबंध प्रासंगिक पत्र के आलोक में आपके द्वारा समर्पित सामग्रियों के नमूनों की जाँच की गई। जाँच-फल प्रतिवेदन इस पत्र के साथ संलग्न कर अग्रेतर कारवाई हेतु सागपि। निम्न रहा है।

अनुलग्नक :- जाँच प्रतिवेदन मूल में।

विश्वनाथराज

14/09/20
कार्यपालक अभियंता
ग्रामीण कार्य विभाग

क्षेत्रीय प्रयोगशाला, दरभंगा।

14/09/2020

OFFICE OF THE EXECUTIVE ENGINEER, R.W.D, REGIONAL LABORATORY, DARBHANGA (BIHAR)
CONCRETE CUBE TEST RESULT

Name of the Scheme Construction of road from Subhash Chandra

Name of the works Division R.W.D. Madhubani

Name of the work Circle Darbhangha

Signature read

Name of Agency M/S. om construction

Package No./Agreement No SO MAD/13-10

Date of Sample Collection 27.9.2020 vide 11 no - 68 Dt - 18-8-20

Sl. No	Date of Casting	Name Of item	Proportion Of MIX	MIX Design	Cube No.	Due Date of Test After 28 Days	Date of Test	Area In sq cm	Maximum Crushing Strength in K.N	Maximum crushing strength in kg/cm ²	Average Strength kg/cm ²	Required Crushing Strength in kg/cm ²	Pattern of Fractures	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	27.9.20	ccp	-	M30	A1	✓	27.9.20	225	670	303.85	303.85	300	by force	↑
2	"	"	-	M30	A2	"	"	225	680	308.38	305.36	300	"	↑
3	"	"	-	M30	A3	"	"	225	690	303.85	305.36	300	"	↑
4	27.9.20	ccp	-	M30	B1	"	"	225	680	308.38	305.36	300	"	↑
5	"	"	-	M30	B2	"	"	225	670	303.85	305.36	300	"	↑
6	"	"	-	M30	B3	"	"	225	670	303.85	305.36	300	"	↑

Signature
14/10/2020
 Laboratory Assistant
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
14.10.2020
 Junior Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
14/10/2020
 Assistant Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
14/10/2020
 Executive Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

OFFICE OF THE EXECUTIVE ENGINEER, R.W.D, REGIONAL LABORATORY, DARBHANGA (BIHAR)
CONCRETE CUBE TEST RESULT

Name of the Scheme Canal of 25000 sqm. Subsidy Scheme Name of the works Division RWD Madhubani
to Kalyanpur Canal Name of the work Circle Darbhanga
 Package No/Agreement No 50 MSD / 13-20 Name of Agency HLS. Co. Construction

Date of Sample Collection 03.9.20 Wade, 15.20 - 6.00 PM - 17.8.20

Sl. No	Date of Casting	Name Of item	Proportion Of MIX	MIX Design	Cube No.	Due Date of Test After 28 Days	Date of Test	Area In sq cm	Maximum Crushing Strength in K.N	Maximum crushing strength in kg/cm ²	Average Strength Kg/cm ²	Required Crushing Strength in kg/cm ²	Pattern of Fractures	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	03.9.20	c/c	-	M30	C1	✓	14.9.20	225	670	303.85	✓	300	By force	↑
2	"	"	-	M30	C2	"	"	225	680	299.31	✓	300	"	↑
3	"	"	-	M30	C3	"	"	225	680	308.58	✓	300	"	Permissible
4	03.9.20	c/c	-	M30	D1	"	"	225	670	303.85	✓	300	"	↑
5	"	"	-	M30	D2	"	"	225	660	299.31	✓	300	"	↑
6	"	"	-	M30	D3	"	"	225	670	303.85	✓	300	"	↑

Signature
 Laboratory Assistant
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
 Junior Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
 Assistant Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

Signature
 Executive Engineer
 R.W.D, Regional Laboratory
 Darbhanga (Bihar)

**OFFICE OF THE EXECUTIVE ENGINEER
RWD, REGIONAL LABORATORY, DARBHANGA (BIHAR)
RESULT OF PHYSICAL TEST FOR GRADATION OF COARSE AGGREGATE**

- Name of the Scheme Const. of road from Subhask... Name of the works Division RWD, Madhupuri
- Package No./Agreement No. 50 M30/19.10 Name of the circle Darbhanga
- Nature of the work S.S. Grading I Name of the Agency M.S. Dms. Construction
- Nature of the Sample Stone material & gravel Sand
- Date of Sample Collection 22.9.20 Vide IT No. 40 19.9.20

Sl.No.	AIV		Flakiness index		Water Absorption		Remarks
	Test Value	Required Value (MAX)	Test Value	Required Value (MAX)	Test Value	Required Value (MAX)	
1	29.40	40	-	-	0.80	2%	Permissible

SIEVE ANALYSIS FOR GRADATION OF S.S. Grading I

Weight of sample taken 30.560 (In Kg)

Sl. No	I.S. Sieve size/ Designation	Wt. of sample retained in Kg	% of weight retained	% of Cumulative retained	% of weight passing	Required value in %	Remarks
1	75 mm	0	0	0	100	100	Permissible
2	26.5 mm	12.698	41.55	41.55	58.45	55 to 75	
3	4.75 mm	8.964	29.33	70.88	29.12	10 to 30	
4	75 micron	6.892	22.55	93.43	6.57	0 to 10	

14/09/2020
Laboratory Assistant
RWD, Regional Laboratory
Darbhanga, (Bihar)

14.9.2020
Junior Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

14/09/2020
Assistant Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

14/09/20
Executive Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

OFFICE OF THE EXECUTIVE ENGINEER
RWD, REGIONAL LABORATORY, DARBHANGA (BIHAR)
RESULT OF PHYSICAL TEST FOR GRADATION OF COARSE AGGREGATE

- Name of the Scheme Construction of road from Subhash Name of the works Division RWD Madhubani
- Package No/Agreement No. 50 MAD/17/10 Name of the circle Darbhanga
- Nature of the work L.A.M. Grade III Name of the Agency M.S. on Construction
- Nature of the Sample Stone Aggregate
- Date of Sample Collection 22.09.2020

Sl. No.	AIV		Flakiness index		Water Absorption		Remarks
	Test Value	Required Value (MAX)	Test Value	Required Value (MAX)	Test Value	Required Value (MAX)	
1	23.40	30	-	-	0.60	2%	Permissible

SIEVE ANALYSIS FOR GRADATION OF Stone Aggregate Grade III
Weight of sample taken 52.650 (In Kg)

Sl. No	I.S. Sieve size/ Designation	Wt. of sample retained in Kg	% of weight retained	% of Cumulative retained	% of weight passing	Required value in %	Remarks
1	63 MM	0	0	0	100	100	Permissible
2	53 MM	1.146	3.50	3.50	96.50	95 to 100	
3	45 MM	6.970	21.34	24.84	75.16	65 to 90	
4	22.4 MM	21.534	65.95	90.79	9.21	0 to 10	
5	11.2 MM	2.412	7.38	98.17	1.83	0 to 5	

14/09/2020
Laboratory Assistant
RWD, Regional Laboratory
Darbhanga, (Bihar)

14.9.2020
Junior Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

14/09/2020
Assistant Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

14/09/20
Executive Engineer
RWD, Regional Laboratory
Darbhanga, (Bihar)

MR-3054

Name of Recd. → Repairs of road from Subhash
Chauk to Keshy Dima. Under MR-3054.

Schedule XLV-Form No. 134

R.W.D MAOHUBANI

DIVISION

R.W.D - RAJNAGAR

SUB-DIVISION

2190

Measurement Book

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 commencement of the measurements relating to each work.)

(These four columns are to be filled in details of the measurements relating to each work.)					Contents of area
Particulars	Details of actual measurement				
	No.	L.	B.	D.	
1st on A/c bill.					
Name of work: → Output & Performance					
Based on maintenance of Road					
* CD work M.R:-N-2019-20					
Madhapur/13 (Tender LD-8474)					
Agency: → M/S OM Construction,					
Reg. Om Narana Narayan					
Ranjan Chatterjee - Madhapur					
C.A. No: → 50 MBD/2019-20.					
Date of Commencement: → 23.01.20					
Date of Completion: → 22.10.20					
Road: Measurement & dt - 10.8.20.					
Item No (1) Clearing & Grouting					
- - - - of E.I.					
$2 \times 33 \times 30 \times 1.00 = 1980 \text{ m}^3$					
$2 \times 10.00 \times 1.00 = 20 \text{ m}^3$					
Total = 2000.00 m ³					
Qty = $\frac{2000}{10000}$ Hectare = 0.20 Hec					
Total Qty = 0.20 Hec					
Item No (2) Construction of G.S.B.					
Gr-I - - - of E.I.					

Continuation

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
B.F. $\rightarrow$ P ₁					51,95,054 = W
10% below $\rightarrow$ pos C.A. = P ₂					51,95,052 W
					Net total = P ₃ 46,75,549 = W
Add 1% $\rightarrow$ P ₄					46,755 = W
					12/9/20
B.F. $\rightarrow$ P ₅					51,95,054 = W
Add 12% list $\rightarrow$ P ₆					6,23,406 = W
Add 1% $\rightarrow$ P ₇					51,950 = W
					Total = P ₈ 58,70,410 = W
10% below $\rightarrow$ pos C.A. = P ₉					5,87,041 = W
					Total = P ₁₀ 52,83,369 = W
					12/9/20
Marked statement. J.E					
(1) Earth $\rightarrow$		465	m ³		
(2) Screening $\rightarrow$		45	m ³		
(3) Some Sand $\rightarrow$		300	m ³		
(4) Stone chip $\rightarrow$		675.40	m ³		
					2/9/20
					J.E.
Continuation					