



सत्यमेव जयते

**भारत सरकार**

**GOVERNMENT OF INDIA**

**केन्द्रीय लोक निर्माण विभाग**

**CENTRAL PUBLIC WORKS DEPARTMENT**

**दिल्ली दर अनुसूची**

**(भाग - 2)**

**DELHI SCHEDULE OF RATES**

**(Vol. 2)**

**2016**



महानिदेशक, के.लो.नि.वि., नई दिल्ली के प्राधिकार के अधीन प्रकाशित  
Published under the Authority of Director General, CPWD, New Delhi

© All rights reserved. No part of this publication, either in English or in Hindi, may be reproduced in any form or by any means, electronic or mechanical including photocopy, recording or any information storage and retrieval system, without permission, in writing, from the Director General, CPWD, New Delhi.

#### **DISCLAIMER**

The rates taken in Delhi Schedule of Rates 2016 are indicative and actual rates shall be governed by the market forces. Further its use by Govt. Departments, PSUs, private bodies & individuals shall be at their own risk and discretion. CPWD shall not be responsible for any ambiguity, discrepancy, dispute or financial loss, arising directly or indirectly by using or following items of DSR by such Govt./Private bodies or individuals.

**For feed back and suggestions, please contact SE(TAS), CPWD, Room No. 418, "A" Wing, Nirman Bhawan, New Delhi. Tel. No. 011-23062339, Email: delsetascsq.cpwd@nic.in**

### **A GOVERNMENT OF INDIA PUBLICATION**

Published by

**DIRECTOR GENERAL**

CPWD, Nirman Bhawan, New Delhi - 110011

&

Printed & Marketed by

#### **JAIN BOOK AGENCY**

Authorised Dealers of Govt. Publications  
C-9, Connaught Place, New Delhi-110001  
Phones : 44556677, 23416390 upto 94  
E-mail : sales@jainbookagency.com  
Website : www.jainbookagency.com

Distributed by

#### **JBA DISTRIBUTORS**

4782/23, Ansari Road,  
Daryaganj  
New Delhi-110002  
Phone : 4433 2211, 44332222  
E-mail : sales@jba.in  
Website : www.jba.in

#### **JAIN BOOK AGENCY (SOUTHEND)**

1, Aurobindo Place Market,  
Hauz Khas, New Delhi-110016  
Phone : 41755666  
E-mail : sales@jainbookagency.com  
Website : www.jainbookagency.com

#### **JAIN BOOK AGENCY (GURGAON)**

19, Central Plaza Mall, Sector 53,  
Golf Course Road,  
Gurgaon 122002 Haryana  
Phone : 4143020  
Mobile : 9810666810

#### **JAIN BOOK AGENCY (INTERNATIONAL)**

RA- 11, Sector- 126,  
Opp. Gate No. 2A of Amity University,  
Noida  
Mobile. : 9210080580

#### **JAIN BOOK AGENCY (GREATER NOIDA)**

11 Jagat farm Complex  
Gama Sector Market  
Near OBC Bank  
Greater Noida  
Phone : 0120-4206655

#### **JAIN BOOK DEPOT**

C - 4, Opp. PVR Plaza, Post Box. No. 51,  
Connaught Place, New Delhi-110001 (India)  
Phone : 011- 23416101 / 02 / 03  
E-mail : sales@jainbookdepot.com



**DIAL-A-BOOK**  
**011-44332211**

Books will be delivered next day by COURIER

**(Payment to courier-boy)**

in Delhi, Noida, Ghaziabad, Faridabad & Gurgaon (nominal courier charges extra)

**ISBN : 978-81-932679-0-5**

**Also available at**

All Leading Booksellers & Authorised Govt. Dealers In India

**Price : Rs. 1200/- (for both volumes) excluding postage and forwarding charges etc.**



**DIVAKAR GARG**  
Director General



सत्यमेव जयते  
भारत सरकार  
Government of India



केन्द्रीय लोक निर्माण विभाग  
निर्माण भवन, नई दिल्ली 110011  
Central Public Works Department  
Nirman Bhawan, New Delhi- 110011  
Tel : 23062556 / 1317, Fax : 23061884  
E-Mail : cpwd\_dgw@nic.in

## FOREWORD

*Delhi Schedule of Rates, being published by Central Public Works Department from time to time, is a very comprehensive technical document and useful in execution of civil construction works. Apart from C.P.W.D., this Schedule of Rates is used as a guide by many departments, institutions, public sector undertakings, architects, builders, contractors, etc.*

*The Central Public Works Department Schedule of Rates was first published in the year 1931, followed by a number of revisions/publications from time to time in order to bring it in line with the prevailing technologies and market rates. The Delhi Schedule of Rates were revised many times in the subsequent years viz 1977, 1981, 1985, 1989, 1993, 1997, 2002, 2007, 2010 (Reprint), 2012, 2013 & 2014.*

*Earlier Hindi version of DSR was being published separately, but considering the convenience and mandate for use of Hindi, the present DSR has been made bilingual and covered in two volumes.*

*The prices of labour and materials have registered some changes since last publication. Besides the cost, there has been spurt of new construction technologies and materials. This has necessitated revision of existing DSR 2014 to include the above changes.*

*Although this DSR contains most of the items of DSR 2014, the nomenclature of existing items has been reviewed & updated wherever found necessary. The items pertaining to new technology and materials have been added in New Sub head 26 for use of field units and feedback on these items.*

*I wish to place on record the technical input and effective coordination on the part of Shri Abhai Sinha, Spl. DG (HQ), Shri Balraj Chadha ADG (TD), Shri M.K. Sharma CE (CSQ)-(Civil) and the efforts put in by Shri S.P. Chaudhary Director (Tech. & PR), Shri P.P. Singh SE (TAS) and his team of officers in CSQ unit in finalizing the DSR-2016 in a short time.*

*I am sure that this Schedule of Rates 2016 will be quite useful to all concerned Engineers & Architects in the Building construction industry in general and CPWD in particular.*

Place: New Delhi

Date: July 2016

  
(Divakar Garg)  
Director General

## PREFACE

1. Delhi Schedule of Rates-2016 includes the existing items of DSR 2014 with deletion of few obsolete items, merger of similar items and addition of new items in line with emerging trends in construction Industry.
2. DSR-2016 is based on the prevailing market rates of materials in Delhi as on 01.04.2016. The labour rates adopted are as per minimum wages applicable w.e.f 01/04/2016 issued by Govt. of Delhi/ Govt. of India, whichever is higher.
3. The cost index for DSR 2016 is **102** with reference to CPWD Plinth Area Rates 2012, having base 100 as on 01/10/2012.
4. This DSR 2016 shall be read along with CPWD specifications 2009 Vol.-I & II with up to date Correction Slips.
5. Following are the **Salient Features** of DSR-2016.
  - 5.1 DSR-2016 is bilingual and in two volumes.
    - 5.1.1 Sub-head Nos. 24, 25 & 26 of DSR-2014 have been re-numbered as 23, 24 & 25 respectively due to separate publication of DSR for 'Horticulture and Land Scaping'.
    - 5.1.2 New Sub- head No. 26 for New Technologies and Materials has been introduced.
    - 5.1.3 The rates of basic materials incorporated in this DSR 2016 are considered for the materials available in the market, conforming to BIS Standards/ CPWD Specifications.
    - 5.1.4 The items relating to uPVC windows have been made composite & units of measurement converted from metre to square metre with a number of possible combinations of window profiles. Provision for tolerance to profiles sizes have been made to allow for innovations and vendor variations.
- 6.0 Keeping in view amendments in IS: 383-2016, the use of manufactured aggregate (RCA & RA) have been permitted in the Concrete and RCC work.

### **Salient Modifications and Changes in Sub Heads:**

- 7.1 **Carriage of Materials:** Item No. 1.1.18 for 'Disposal of moorum/ building rubbish/ malba/ similar unserviceable, dismantled or waste material by mechanical transport' has been added.
- 7.2 **Concrete Work:** The items with FINE SAND have been deleted.
- 7.3 **RCC Work:** The items of 1:2:4 nominal concrete mix (M15) have been modified to 1:1 ½ :3 nominal concrete mix (M20) due to changes in IS 456 in the minimum grade of concrete to M20 keeping in view durability consideration. However, the use of nominal mix in RCC work is to be discouraged.
- The item no. 5.29 for Non- asbestos cement bonded wood particle board 6 mm thick as per IS: 14276 for covering of expansion joints has been added.
- 7.4 **Brick Work:** The item No. 6.47 for 'Autoclaved Aerated Cement blocks masonry with polymer modified adhesive mortar' has been added.
- 7.5 **Stone Work:** Item No. 7.23.5 wall lining (veneer work) with Gang saw cut sand stone has been added.
- 7.6 **Marble Work:** Item No. 8.13 for Polished Granite stone flooring has been added.
- 7.7 **Wood Work:** Item No. 8.13 for Cement bonded wood particle board as per IS:14276 has been added.
- Item Nos. **9.147.A to 9.147.F.4** for uPVC shutters having mode of measurement in square metre have been added by replacing old item in running metre.
- Item Nos. 9.161 to 9.165 (for 120 minutes fire rated) fire resistant door have been added.
- 7.8 **Steel Work:** Item Nos. 10.31 for angle iron frames for doors, windows for Maintenance Works has been added.
- 7.9 **Flooring:** Items Nos. 11.37.A & 11.46. A for ceramic tiles for skirting and screen printed border tile have been added.
- 7.10 **Roofing:** Item No. 12.26.2 for 6 mm thick Cement bonded wood particle board as per IS:14276 has been added.
- 7.11 **Finishing:** Item No. 13.86 for 6 mm plaster on cement concrete or reinforced cement concrete work with white cement based polymer modified self curing mortar has been added.
- 7.12 **Repairs to building:** Item No. 14.75 for repair to plaster with white cement based polymer modified self curing mortar has been added.

7.13 **Road Work:** Item No. 16.95 to 16.97 for Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes have been added.

7.14 **Sanitary Installation:** Items pertaining to Hubless pipes as per IS:15905 ( 22 Nos.) vide Item Nos 17.35.1.3 to 17.60.2.3 have been added.

Item No 17.81 pertaining to floor mounted double siphoned water closet have been added.

7.15 **Water Proofing :** Item No. 22.22 to 22.26 for waterproofing treatment have been added.

## 8.0 **New Technologies and Materials**

With a view to give boost to make in India initiative of the Government, a new sub Head has been added for New Technologies and Materials. These new items are included for a period of two years and then performance shall be reviewed. Following are items added under this sub head.

8.1 Phenol bonded Bamboo wood flooring, wall skirting, wall cladding. 25 mm and 30mm thick panelled and panelled /glazed shutters for doors and windows and Bamboo wood frame.

8.2 50mm thick extruded polystyrene rigid insulation board for cavity wall and under deck insulation.

8.3 Relevant items for modular kitchen.

8.4 Items relating to Polypropylene Geogrid, Nonwoven Geotextile drainage composite and High strength flexible Geogrids (HSFG) as soil reinforcement.

8.5 Items for Aluminium profile industrial troughed sheet roofing.

8.6 Security guard with and without gun.

8.7 P/F Densified calcium silicate false ceiling tiles, GRG false ceiling tiles and Mineral fiber false ceiling tiles.

8.8 Repair and Rehabilitation 13 Nos. Items

8.9 New Technology items viz. Light Gauge Steel Framed Structure (LGSFS), Expanded Polystyrene Core (EPS Core) wall panel and roof/floor panels and Customized Aluminum formwork for monolithic construction.


8.10 While preparing the DSR, it is ensured that brand name, product of any particular company, proprietary items does not find place in the nomenclature of the items. In case, any such item having brand name/ manufactures name is noticed, it may be brought to the notice of Superintending Engineer (TAS), CPWD, Nirman Bhawan, New Delhi for remedial action.

9.0 Lot of efforts have gone into the preparation of this Delhi Schedule of Rates 2016 (Bilingual). I convey my deep appreciation and sincere thanks to Shri M. K. Sharma - CE(CSQ), Shri S. P. Chaudhary - Director(Tech. & PR), Shri P. P. Singh - SE(TAS) and his team comprising Shri R. B. Garg - EE(TAS-II), Shri K. R. Meena - EE(TAD), Shri Kunwar Chandresh - EE(e-Gov.), Shri S. K. Srivastava - EE(QA), Shri D. K. Chaudhary - EE(QA),

Shri D. S. Adhikari - AE(QA), Shri K. N. Singh - AE(TAS), Shri D. K. Malhotra - AE(TAS), Ms. Anjana Reghu - JE, Shri Chalapaka Ramraju - JE, Shri Naveen Kumar P. - JE, Shri Jai Prakash - Chief Estimator, Shri Kishan Singh - Sr. D/man, Shri Bhim Singh - Sr. D/man; Shri Sanjeev Rastogi - SE(C&M) and his team comprising Shri Virendra Kumar - EE(M), Shri Keshav Ram - EE(C), Shri H. K. Gupta - AE(C), Shri Dalbir Singh - Sr.D/man; Shri Som Lal Kajal - EE(HQ); Shri Sanjay Singh - AD(OL) and his team for Hindi translation of DSR-2016, and other officers and staff of CSQ whose names are not mentioned here, for their sincere efforts made in the preparation of this document in such a short time. Various Committees and field units, who contributed field inputs, also deserve appreciation for their timely help.

- 10.0 Although due care has been taken to print the DSR- 2016 as correctly as possible, there is possibility that some errors might have crept in inadvertently. In case, any error or omission is noticed, it may be brought to the notice of Superintending Engineer (TAS), CPWD, Room no. 418, 'A', Nirman Bhawan, New Delhi – 110011 (Tele fax. 011-23062339 ).

Suggestions for improvement are always welcome.



(Balraj Chadha)

ADG (TD) CPWD

**Note :- In case of any discrepancy between English and Hindi versions, the English version shall be held valid.**

## **Committees for Bringing Out New edition of DSR 2016**

*CPWD DSR is a very comprehensive document. Delhi Schedule of Rate 2016 includes the existing item of DSR 2014 with deletion of few obsolete items, merger of similar items and addition of new items in line with emerging trends in construction industry. DSR 2016 is based on prevailing market rates of material and labour in Delhi as on 01.04.2016. To bring out new edition of DSR 2016 it was felt necessary to take input from as many officers as possible and utilize their experiences in this regard. Accordingly, the following committees were constituted for the above task.*

### **I. Drafting Committee**

- |     |   |                 |
|-----|---|-----------------|
| (a) | <i>Shri M.K. Sharma, CE (CSQ)-Civil</i>               | <i>Chairman</i> |
| (b) | <i>Shri S.P. Chaudhary, Director (Tech. &amp; PR)</i> | <i>Member</i>   |
| (c) | <i>Shri Sanjeev Rastogi, SE (C&amp;M)</i>             | <i>Member</i>   |
| (d) | <i>Shri P.P. Singh, SE (QA-cum-TLC)</i>               | <i>Member</i>   |
| (e) | <i>Shri K.R. Meena, EE (TAD)</i>                      | <i>Member</i>   |
| (f) | <i>Shri R.B. Garg, EE (TAS)</i>                       | <i>Member</i>   |
| (g) | <i>Shri Kunwar Chandresh, EE (E-gov.)</i>             | <i>Member</i>   |
| (h) | <i>Shri D.K. Chaudhary, EE (QA)</i>                   | <i>Member</i>   |
| (i) | <i>Shri S.K. Srivastava, EE (QA)</i>                  | <i>Member</i>   |
| (j) | <i>Shri Keshav Ram, EE (Contracts)</i>                | <i>Member</i>   |
| (k) | <i>Shri Virendra Kumar, EE (Manual)</i>               | <i>Member</i>   |

### **2. Committee for review/revision of items of sub head 3, 4, 5 & 20 of DSR 2014**

- |     |                                  |                 |
|-----|----------------------------------|-----------------|
| (a) | <i>Shri A.K. Garg, CE (CDO)</i>  | <i>Chairman</i> |
| (b) | <i>Shri Rajesh Khare, SE (D)</i> | <i>Member</i>   |
| (c) | <i>Shri A.K. Gupta, SE (D)</i>   | <i>Member</i>   |

### **3. Committee for review/ revision of items of sub head 9, 21, & 25 of DSR 2014**

- |     |   |                 |
|-----|---|-----------------|
| (a) | <i>Shri Prabhakar Singh, CE (NDZ)-I</i> | <i>Chairman</i> |
| (b) | <i>Shri K.S. Warriach, SE (P)-NDZ-I</i> | <i>Member</i>   |
| (c) | <i>Shri Manoj Talreja, SE DCC-II</i>    | <i>Member</i>   |

### **4. Committee for review/ revision of items of sub head 1, 2 & 26 of DSR 2014**

- |     |   |                 |
|-----|---|-----------------|
| (a) | <i>Shri Akhilesh Kumar, CE (NDZ)-II</i> | <i>Chairman</i> |
| (b) | <i>Shri R.K. Kashyap SE (P)-NDZ-II</i>  | <i>Member</i>   |
| (c) | <i>Shri B.K. Sinha, SE-DCC-IX</i>       | <i>Member</i>   |



**5. Committee for review/ revision of items of sub head 11,12 & 13 of DSR 2014**

- (a) Shri Bhagwan Singh, CE (NDZ)-III Chairman  
(b) Shri N.K. Khatri, SE (P)-DCC-VI Member  
(c) Shri Rajeev Gupta, SE-DCC-VIII Member

**6. Committee for review/revision of items of sub head 6, 7, 10, & 24 of DSR 2014**

- (e) Shri P.K. Singh, CE (NDZ)-IV Chairman  
(a) Shri Rajeev Gupta, SE-DCC-V Member  
(b) Shri R.R. Verma, PM SCP Member

**7. Committee for review / revision of items of sub head 17 & 18 of DSR 2014**

- (a) Shri Ranjit Singh, CE (NDZ-V) Chairman  
(b) Shri Rajesh Banga, SE-DCC-IV Member  
(c) Shri Prem Mohan, PM NDP Circle Member  
(d) Shri Anurag Khare, SE-VBC Member

**8. Committee for review/revision of items of sub head 22 of DSR 2014**

- (a) Shri S.L. Meena, CE (NDZ)-VI Chairman  
(b) Shri O.S. Saini, SE-DCC-X Member

**9. Committee for review/revision of items of sub head 14 & 15 of DSR 2014**

- (a) Shri Brijendra Kumar, CE (NDZ)-VII Chairman  
(b) Shri S.S. Khanna, SE-DCC-XI Member  
(c) Shri Gajendra Kumar, SE-DCC-XII Member

**10. Committee for review/revision of items of sub head 8 of DSR 2014**

- (a) Shri Rabindra Kumar, CE (NDZ)-VIII Chairman  
(b) Shri Anurag Garg, SE GCC Member

**11. Committee for review/revision of items of sub head 16 & 19 of DSR 2014**

- (a) Shri S.K. Rampal, CE (PWD-MZ-I) Chairman  
(b) Shri Pradeep Gupta, CE, (East Zone) Member  
(c) Shri A.K. Agarwal, SE (NE) Member  
(d) Shri K.R. Bhandaria, SE (NW) Member

**12. Committee for making available basic rates for building materials as on 01.04.2016**

- (a) Shri Prabhakar Singh, CE (NDZ)-I Now ADG (NDR)  
(b) Shri Akhilesh Kumar, CE (NDZ)-II  
(c) Shri Bhagwan Singh, CE (NDZ)-III  
(d) Shri P.K. Singh, CE (NDZ)-IV  
(e) Shri S.K. Rampal, CE (PWD MZ-I)

The above committees carried out their work under the overall supervision and guidance of **Shri P.K. Garg the then ADG (TD)**.

\*\*\*\*\*

# C O N T E N T S

## Vol. 1

SH. No.	NAME OF SUB-HEAD	PAGE No.
<b>A.</b>	<b>BASIC RATES</b>	
0.1	HIRE CHARGES OF PLANTS	2
0.2	LABOUR	5
0.3	MATERIALS	7
0.4	CARRIAGE CODES	63
<b>B.</b>	<b>SUB -HEADS</b>	
1.	Carriage of Materials	66
2.	Earth Work	74
3.	Mortars	82
4.	Concrete Work	85
5.	Reinforced Cement Concrete	93
6.	Brick Work	108
7.	Stone Work	116
8.	Marble and Granite Work	126
9.	Wood and PVC Work	131
10.	Steel Work	179
11.	Flooring	187
12.	Roofing	201

# C O N T E N T S

## Vol. 2

SH. No.	NAME OF SUB-HEAD	PAGE No.
13	Finishing	223
14	Repairs to Buildings	236
15	Dismantling and Demolishing	251
16	Road Work	259
17	Sanitary Installations	283
18	Water Supply	308
19	Drainage	349
20	Pile work	364
21	Aluminium Work	371
22	Water Proofing	378
23	Rain Water Harvesting & Tubewells	389
24	Conservation of Heritage Buildings.	395
25	Structural Glazing Aluminium Composite Panel	399
26	New Technologies and Materials	407
<b>C.</b>	<b>CEMENT CONSUMPTION STATEMENT</b>	429
<b>D.</b>	<b>BITUMEN CONSUMPTION STATEMENT</b>	464

**Note: For Sub Heads 1 to 12 refer to Vol. 1**

# **DELHI SCHEDULE OF RATES**

**(Vol. 2)**

**दिल्ली दर अनुसूची**

**(भाग - 2)**

**2016**

**SUB HEAD : 13.0**

**FINISHING**

### BASIC RATES (SH: 13.0 FINISHING)

Code No.	Description	Unit	Rate ₹
0101	Bhisti	day	407.00
0112	Carpenter 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0117	Assistant Fitter or 2nd class Fitter	day	448.00
0122	Mason (for plaster of paris work) 1st class	day	487.00
0123	Mason (brick layer) 1st class	day	487.00
0131	Painter	day	448.00
0141	White Washer	day	407.00
0155	Mason (average)	day	467.00
0156	Carpenter (Average)	day	467.00
0324	Coal Tar	litre	30.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0368	White Cement	tonne	11200.00
0763	Glue	kilogram	70.00
0771	Kerosene oil	litre	45.00
0772	White Cement based Polymer modified self curing compound in powder form	kg	15.00
0775	Dehradun white lime	quintal	550.00
0776	Satna lime	quintal	370.00
0777	Dry hydrated lime (factory made)	quintal	280.00
0801	Silicon and acrylic emulsion	litre	130.00
0802	Acrylic distemper 1st quality , having VOC content less than 50 grams/ litre	Kg	38.00
0803	Acrylic emulsion, having VOC content less than 50 grams/ litre	litre	180.00
0804	Premium acrylic emulsion of interior grade, having VOC content less than 50 grams/ litre	litre	210.00
0805	Synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre	litre	200.00
0806	Ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre	litre	125.00
0807	Ready mixed red oxide zinc chromatic on steel/ iron work, having VOC content less than 250 grams/ litre	litre	120.00
0808	Water thinnable cement primer for interior wall surface, having VOC content less than 50 grams/ litre	litre	56.00
0809	Exterior primer	kilogram	52.00
0815	Dry distemper	kilogram	30.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	45.00
0818	Linseed oil (double boiled)	litre	200.00
0820	Cement primer	litre	60.00
0821	Distemper primer	litre	59.00
0823	Pink primer (for wood)	litre	85.00
0824	White cement based putty	kg	20.00
0826	Aluminium paint	litre	130.00
0827	Acid proof paint (chocolate or black)	litre	225.00
0828	Anticorrosive bituminous paint (black)	litre	100.00
0829	Black Japan paint	litre	90.00
0830	Enamel paint	litre	155.00
0831	Floor enamel paint in all shades except green	litre	122.00
0833	Synthetic enamel paint in black or chocolate shade	litre	170.00
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	150.00
0835	Plastic emulsion paint	litre	200.00
850	White lead	kilogram	150.00
0851	Water proofing cement paint	kilogram	38.00
0855	Wax polish (ready made)	kilogram	250.00
0856	Ordinary varnish	litre	90.00
0857	Superior copal varnish	litre	130.00
0858	Superior spar varnish	litre	130.00
0859	Oil type wood preservative	litre	140.00
0868	Premixed super white gypsum plaster	kg	5.00
0869	Plaster of Paris	kilogram	4.00
0982	Coarse sand (zone III)	cum	1200.00
0999	Shellac	kilogram	300.00
1000	Spirit	litre	50.00
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	900.00
1198	Second class kail wood in planks	10 cudm	260.00
1213	Water proofing materials	kilogram	35.00
1216	Whiting	quintal	600.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	103.77
2203	Carriage of Coarse sand	cum	103.77
2209	Carriage of Cement	tonne	92.24
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1200.00
4201	Aluminium primer	litre	88.00
4202	Red oxide Zinc chromate primer	litre	65.00
4203	Copper acetate	kilogram	300.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
4204	Hydrochloric acid	kilogram	35.00
4205	Copper chloride	kilogram	280.00
4206	Copper nitrate	kilogram	220.00
4207	Ammonium chloride	kilogram	20.00
7239	Epoxy paint	litre	240.00
7240	Fire retardant paint	litre	269.00
7306	Aluminium T or L sections	kilogram	200.00
8504	Multi surface paint	litre	255.00
8505	Acrylic exterior paint	litre	170.00
8506	Premium Acrylic exterior paint	litre	203.00
8507	Textured exterior paint	litre	230.00
8509	Special Primer (C.W.)	litre	140.00
8510	Metal Primer (U.G.)	litre	90.00
8733	Synthetic ployster triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40	kg	400.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73



## 13.0 FINISHING

Code No.	Description	Unit	Rate ₹
<b>Note :- Rates for external plastic are for height upto 10m from ground level in less otherwise stated.</b>			
<b>CEMENT PLASTER (IN FINE SAND)</b>			
13.1	12 mm cement plaster of mix :		
13.1.1	1:4 (1 cement: 4 fine sand)	sqm	172.95
13.1.2	1:6 (1 cement: 6 fine sand)	sqm	160.35
13.2	15 mm cement plaster on the rough side of single or half brick wall of mix :		
13.2.1	1:4 (1 cement: 4 fine sand)	sqm	200.25
13.2.2	1:6 (1 cement: 6 fine sand)	sqm	185.20
13.3	20 mm cement plaster of mix :		
13.3.1	1:4 (1 cement: 4 fine sand)	sqm	240.15
13.3.2	1:6 (1 cement: 6 fine sand)	sqm	220.60
<b>CEMENT PLASTER (IN COARSE SAND)</b>			
13.4	12 mm cement plaster of mix :		
13.4.1	1:4 (1 cement: 4 coarse sand)	sqm	180.85
13.4.2	1:6 (1 cement: 6 coarse sand)	sqm	168.25
13.5	15 mm cement plaster on rough side of single or half brick wall of mix:		
13.5.1	1:4 (1 cement: 4 coarse sand)	sqm	209.65
13.5.2	1:6 (1 cement: 6 coarse sand)	sqm	194.60
13.6	20 mm cement plaster of mix :		
13.6.1	1:4 (1 cement: 4 coarse sand)	sqm	252.40
13.6.2	1:6 (1 cement: 6 coarse sand)	sqm	232.85
<b>CEMENT PLASTER WITH A FLOATING COAT OF NEAT CEMENT</b>			
13.7	12 mm cement plaster finished with a floating coat of neat cement of mix :		
13.7.1	1:3 (1 cement: 3 fine sand)	sqm	226.80
13.7.2	1:4 (1 cement: 4 fine sand)	sqm	214.20
13.8	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :		
13.8.1	1:3 (1 cement: 3 fine sand)	sqm	256.55
13.8.2	1:4 (1 cement: 4 fine sand)	sqm	241.50
13.9	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.		
13.9.1	12 mm cement plaster	sqm	234.70
13.9.2	20 mm cement plaster	sqm	313.25

Code No.	Description	Unit	Rate ₹
13.10	15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall.	sqm	265.95
	<b>CEMENT PLASTER IN TWO COATS</b>		
13.11	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement : 6 fine sand).	sqm	255.55
13.12	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.	sqm	272.05
13.13	12 mm cement plaster 1:2 (1 cement : 2 stone dust).	sqm	201.95
13.14	15 mm cement plaster 1:2 (1 cement : 2 stone dust) on the rough side of single or half brick wall.	sqm	234.90
13.15	20 mm cement plaster 1:2 (1 cement : 2 stone dust).	sqm	285.30
	<b>6 MM CEMENT PLASTER</b>		
13.16	6 mm cement plaster of mix :		
	13.16.1 1:3 (1 cement : 3 fine sand)	sqm	143.80
13.17	6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.	sqm	192.85
13.18	Neat cement punning.	sqm	42.60
	<b>ROUGH CAST PLASTER</b>		
13.19	Rough cast plaster upto 10 m height above ground level with a mixture of sand and gravel or crushed stone from 6 mm to 10 mm nominal size, dashed over and including the fresh plaster in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.		
	13.19.1 Ordinary cement finish using ordinary cement	sqm	438.90
	<b>PEBBLE DASH PLASTER</b>		
13.20	Pebble dash plaster upto 10 m height above ground level with a mixture of washed pebble or crushed stone 6 mm to 12.5 mm nominal size, dashed over and including fresh plaster in two layers under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand) and top layer 10 mm cement plaster with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 10% finely grounded hydrated lime by volume of cement.	sqm	415.00
13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers	.Per bag of 50 kg cement used in the mix	50.35

Code No.	Description	Unit	Rate ₹
13.22	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	40.65
13.23	Extra for plastering on circular work not exceeding 6 m in radius:		
13.23.1	In one coat	sqm	20.85
13.23.2	In two coats	sqm	31.80
13.24	Extra for plastering done on moulding, cornices or architraves including neat finish to line and level:		
13.24.1	In one coat	sqm	305.45
13.24.2	In two coats	sqm	503.20
13.25	Extra for plastering:		
13.25.1	Spherical ceiling	sqm	77.70
13.25.2	Groined ceiling	sqm	84.45
13.25.3	Flewing soffits	sqm	51.20
13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	sqm	118.70
	<b>ARTIFICIAL STONE PLASTER</b>		
13.27	Extra for lining out plaster to imitate stone or concrete blocks walling.	sqm	48.85
	<b>PLAIN CEMENT MORTAR BANDS</b>		
13.28	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand):		
13.28.1	Flush Band	cm per metre	3.45
13.28.2	Sunk Band	cm per metre	3.75
13.28.3	Raised Band	cm per metre	4.25
13.28.4	Moulded Band	cm per metre	7.15
13.29	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):		
13.29.1	Flush Band	cm per metre	4.25
13.29.2	Sunk Band	cm per metre	4.65
13.29.3	Raised Band	cm per metre	5.25
13.29.4	Moulded Band	cm per metre	9.60
13.30	18 mm thick moulded cement mortar band in two coats under layer 12 mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6 mm thick with cement mortar 1:4 (1 cement : 4 fine sand).	cm per metre	9.60
	<b>POINTING ON BRICK WORK</b>		
13.31	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand):		
13.31.1	Flush / Ruled/ Struck or weathered pointing	sqm	115.85
13.31.2	Raised and cut pointing	sqm	188.70

Code No.	Description	Unit	Rate ₹
<b>POINTING ON TILE BRICK WORK</b>			
13.32	Pointing on tile brick work with cement mortar 1:3 (1 cement : 3 fine sand):		
13.32.1	Flush/ Ruled/ Struck or weathered pointing	sqm	158.45
<b>POINTING ON STONE WORK</b>			
13.33	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :		
13.33.1	Flush/ Ruled pointing	sqm	168.45
13.33.2	Raised and cut pointing	sqm	305.70
13.34	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust).	sqm	319.25
13.35	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):		
13.35.1	Flush/ Ruled pointing	sqm	95.05
13.36	Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	5.40
<b>INTERIOR FINISHING</b>			
13.37	White washing with lime to give an even shade :		
13.37.1	New work (three or more coats)	sqm	17.25
13.38	Satna lime wash on walls with one coat.	sqm	7.00
13.39	Colour washing such as green, blue or buff to give an even shade :		
13.39.1	New work (two or more coats) with a base coat of white washing with lime	sqm	23.60
13.39.2	New work (two or more coats) with a base coat of whitening	sqm	23.25
13.40	Distempering with dry distemper of approved brand and manufacture (two or more coats) of required shade on new work, over and including water thinnable priming coat to give an even shade.	sqm	71.85
13.41	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
13.41.1	New work (two or more coats) over and including water thinnable priming coat with cement primer	sqm	93.70
13.42	Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.		
13.42.1	Two or more coats on new work	sqm	53.15
13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface :		
13.43.1	Water thinnable cement primer	sqm	36.95
<b>EXTERIOR FINISHING</b>			
13.44	Finishing walls with water proofing cement paint of required shade :		
13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sqm)	sqm	58.80

Code No.	Description	Unit	Rate ₹
13.45	Finishing walls with textured exterior paint of required shade :		
13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	sqm	150.65
13.46	Finishing walls with Acrylic Smooth exterior paint of required shade :		
13.46.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	sqm	96.05
13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:		
13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	sqm	96.80
13.48	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :		
13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	sqm	98.95
13.48.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/10 sqm of approved brand and manufacture	sqm	88.60
13.48.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/ 10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand and manufacture	sqm	84.75
13.50	Applying priming coat:		
13.50.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	sqm	34.95
13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	35.20
13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	sqm	29.10
13.50.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	15.60
13.51	Painting with silicon & acrylic emulsion based water thinnable sealer of approved brand and manufacture on wet or patchy portion of plastered surfaces :		
13.51.1	One coat	sqm	56.65
13.51.2	Two coats	sqm	90.05

Code No.	Description	Unit	Rate ₹
13.52	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		
13.52.1	On steel work	sqm	122.50
13.52.2	On concrete work	sqm	124.50
13.53	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.53.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution	sqm	84.00
13.54	Applying a coat of mordant solution on G.S. sheet:		
13.54.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	29.25
13.54.2	With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water	sqm	29.05
13.55	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture, over and including a priming of ready mixed zinc chromate yellow primer on new work:		
13.55.1	100 mm diameter pipes	metre	35.85
13.55.2	150 mm diameter pipes	metre	53.50
13.56	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.		
13.56.1	100 mm diameter pipes	metre	40.55
13.56.2	150 mm diameter pipes	metre	60.40
13.57	Painting with oil type wood preservative of approved brand and manufacture :		
13.57.1	New work (two or more coats)	sqm	32.20
13.58	Providing and applying two coats of fire retardant paint on cleaned wood / ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	sqm	232.55
13.59	Coal tarring two coats on new work using 0.16 Litre and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	33.45
13.60	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade :		
13.60.1	Two or more coats on new work	sqm	84.45
13.61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
13.61.1	Two or more coats on new work	sqm	78.40

Code No.	Description	Unit	Rate ₹
13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	sqm	112.30
13.63	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
13.63.1	Two or more coats on new work	sqm	68.35
13.64	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
13.64.1	Two or more coats on new work	sqm	85.85
13.65	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
13.65.1	Two or more coats on new work	sqm	65.20
13.66	Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade :		
13.66.1	Two or more coats on new work	sqm	76.50
13.67	Varnishing with varnish of approved brand and manufacture :		
13.67.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish	sqm	114.85
13.67.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish	sqm	115.85
13.68	French spirit polishing :		
13.68.1	Two or more coats on new works including a coat of wood filler	sqm	209.75
13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
13.69.1	New work	sqm	92.70
13.70	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	sqm	43.50
13.71	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height	2.70
13.72	Washed stone grit plaster on exterior walls height upto 10 metre above ground level, in two layers, under layer 12 mm cement plaster 1:4 (1 cement : 4 coarse sand ), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15 mm cement plaster 1:1/ 2:2 (1 cement: 1/2 coarse sand : 2 stone chipping 10 mm nominal size), in panels with groove all around as per approved pattern, including scrubbing and washing the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in- charge (payment for providing grooves shall be made separately).	sqm	582.60

Code No.	Description	Unit	Rate ₹
13.73	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer, including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :		
13.73.1	15 mm wide and 15 mm deep groove	metre	34.40
13.73.2	20 mm wide and 15 mm deep groove	metre	34.95
13.74	Extra for washed grit plaster on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	85.90
13.75	Extra for washed stone grit plaster on circular work not exceeding 6 m in radius (in two coats).	sqm	60.45
13.76	Forming groove of uniform size from 12x12 mm and upto 25x15 mm in the top layer of washed stone grit plastered surface as per approved pattern, including providing and fixing aluminum channels of appropriate size and thickness (not less than 2 mm), nailed to the under layer with rust proof screws and nails and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	71.60
13.77	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	63.90
13.78	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.	sqm	217.35
13.79	Extra for addition of synthetic Polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125 gms. of synthetic Polyester triangular fibre for 50 Kgs. cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag of 50 Kg of cement	58.10
13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	87.35
13.81	Distempering with 1st quality acrylic distemper, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.		
13.81.1	One coat	sqm	30.90
13.81.2	Two coats	sqm	49.65
13.82	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.		
13.82.1	One coat	sqm	49.35
13.82.2	Two coats	Sqm	73.90



Code No.	Description	Unit	Rate ₹
13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.		
13.83.1	One coat	sqm	46.65
13.83.2	Two coats	Sqm	71.00
13.84	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.		
13.84.1	One coat	sqm	49.75
13.84.2	Two coats	sqm	75.00
13.85	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound ) content.		
13.85.1	With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre	sqm	38.45
13.85.2	With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 250 grams/ litre	sqm	32.55
13.85.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	sqm	36.95
13.86	<b>6 mm plaster on cement concrete or reinforced cement concrete work with white cement based polymer modified self curing mortar of approved make as per the direction of Engineer-In-Charge.</b>	<b>sqm</b>	<b>146.45</b>

**SUB HEAD : 14.0**

**REPAIRS TO BUILDING**

## BASIC RATES (SH: 14.0 REPAIRS TO BUILDING)

Code No.	Description	Unit	Rate ₹
0006	Hire charges of Spraying machine including electric charges	day	250.00
0011	Hire charges of Pump set of capacity 4000 litres/hour	day	650.00
0058	Air compressor	hour	200.00
0085	Using cost of Ultra Violet Radiation tube	Hour	189.00
0086	Compressor, gun, rubber pipes & other accessories- hire charge of plant & machinery i/c necessary fuel	day	4000.00
0087	Hire Charges of Suction Jeting machine 2200 PSI machine including POL and operator	day	36000.00
0100	Bandhani	day	407.00
0101	Bhisti	day	407.00
0102	Blacksmith 1st class	day	487.00
0103	Blacksmith 2nd class	day	448.00
0111	Carpenter 1st class	day	487.00
0112	Carpenter 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0117	Assistant fitter or 2nd class fitter	day	448.00
0119	Glazier	day	448.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0126	Mason 1st class	day	487.00
0128	Mate	day	407.00
0129	Sewer man	day	390.00
0130	Mistry	day	487.00
0131	Painter	day	448.00
0138	Sprayer (for bitumen, tar etc.)	day	407.00
0139	Skilled Beldar (for floor rubbing etc.)	day	407.00
0141	White Washer	day	407.00
0155	Mason (average)	day	467.00
0156	Carpenter (average)	day	467.00
0160	Technician	day	775.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	1300.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	1300.00
0302	Safeda ballies 125 mm diameter	metre	35.00
0308	Bhusa	quintal	600.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0389	Brass single acting spring hinges 150 mm	each	460.00
0390	Brass single acting spring hinges 125 mm	each	298.00
0391	Brass single acting spring hinges 100 mm	each	260.00
0392	Brass double acting spring hinges 150 mm	each	498.00

Code No.	Description	Unit	Rate ₹
0393	Brass double acting spring hinges 125 mm	each	410.00
0394	Brass double acting spring hinges 100 mm	each	370.00
0404	Brass flush bolt 250 mm	each	150.00
0405	Brass flush bolt 150 mm	each	130.00
0406	Brass flush bolt 100 mm	each	90.00
0417	Brass 150 mm floor door stopper (0.357kg)	each	170.00
0418	Brass hard drawn hooks and eyes 300 mm	10 Nos	650.00
0419	Brass hard drawn hooks and eyes 250 mm	10 Nos	635.00
0420	Brass hard drawn hooks and eyes 200 mm	10 Nos	590.00
0421	Brass hard drawn hooks and eyes 150 mm	10 Nos	450.00
0422	Brass hard drawn hooks and eyes 100 mm	10 Nos	400.00
0423	Brass casement window fastener	each	50.00
0427	Brass quadrant stays 300 mm	each	125.00
0428	Brass fanlight catch	10 Nos	200.00
0429	Brass fanlight pivot	10 Nos	195.00
0430	Brass chain with hook for fan light catch	each	40.00
0442	Brass helical spring 150 mm	each	310.00
0444	Brass curtain rod 20 mm dia 1.25 mm thick	metre	120.00
0445	Brass curtain rod 25 mm dia 1.25 mm thick	metre	140.00
0446	Brass brackets (curtain rods) 20 mm	each	45.00
0449	Brass screws 50 mm	100 Nos	220.00
0450	Brass screws 40 mm	100 Nos	170.00
0452	Brass screws 25 mm	100 Nos	100.00
0524	Chromium plated Brass butt hinges (heavy) type 75x65x4 mm weighing not less than 200gms	10 Nos	1000.00
0525	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4mm	10 Nos	900.00
0526	Chromium plated Brass butt hinges (light/ordinary) type 100x 70x4 mm	10 Nos	750.00
0527	Chromium plated Brass butt hinges (light/ordinary) type 75x 40x2.5 mm	10 Nos	460.00
0528	Chromium plated Brass butt hinges (light/ordinary) type 50x 40x2.5 mm	10 Nos	200.00
0585	Chromium plated Brass screws 50 mm	100 Nos	340.00
0586	Chromium plated Brass screws 40 mm	100 Nos	310.00
0587	Chromium plated Brass screws 30 mm	100 Nos	250.00
0589	Chromium plated Brass screws 20 mm	100 Nos	170.00
0595	Bright finished or black enameled mild steel butt hinges 100x 58x1.90 mm	10 Nos	85.00
0597	Bright finished or black enameled mild steel butt hinges 50x 37x1.50 mm	10 Nos	50.00

Code No.	Description	Unit	Rate ₹
0608	Nickel plated bright finished mild steel piano hinges 1 mm thick 25 mm wide	metre	40.00
0637	Bright finished or black enameled mild steel screws 40 mm	100 Nos	63.00
0639	Bright finished or black enameled mild steel screws 25 mm	100 Nos	37.00
0640	Bright finished or black enameled mild steel screws 20 mm	100 Nos	32.00
0761	Fuel wood	quintal	500.00
0771	Kerosene oil	litre	45.00
0772	White cement based polymer modified self curing compound in powder form	kg	15.00
0775	Dehradun white lime	quintal	550.00
0811	Mud (dry)	cum	150.00
0815	Dry distemper	kilogram	30.00
0816	Oil bound washable distemper/ Acrylic distemper	kilogram	45.00
0826	Aluminium paint	litre	130.00
0827	Acid proof paint (chocolate or black)	litre	225.00
0828	Anticorrosive bituminous paint (black)	litre	100.00
0829	Black Japan paint	litre	90.00
0833	Synthetic enamel paint in black or chocolate shade	litre	170.00
0835	Plastic emulsion paint	litre	200.00
0845	Roofing paint for iron sheets in red colour	litre	120.00
0851	Water proofing cement paint	kilogram	38.00
0855	Wax polish (ready made)	kilogram	250.00
0856	Ordinary varnish	litre	90.00
0857	Superior copal varnish	litre	130.00
0858	Superior spar varnish	litre	130.00
0859	Oil type wood preservative	litre	140.00
0863	Putty for wood work	kilogram	30.00
0982	Coarse sand (zone III)	cum	1200.00
0999	Shellac	kilogram	300.00
1000	Spirit	litre	50.00
1003	Mild steel round bar above 12 mm dia	quintal	3575.00
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	3775.00
1008	Flats up to 10 mm in thickness	quintal	3675.00
1023	Galvanised steel J or L hooks 8 mm dia	10 Nos	115.00
1034	Bolts and nuts up to 300 mm in length	quintal	5100.00
1174	Red sand stone slab 45 mm to 50 mm thick (un-dressed)	sqm	225.00
1186	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10 cudm	1100.00
1188	First class teak wood in planks	10 cudm	850.00
1189	Second class teak wood in scantling	10 cudm	660.00
1190	Second class teak wood in planks	10 cudm	675.00

Code No.	Description	Unit	Rate ₹
1194	Second class deodar wood in planks	10 cudm	500.00
1196	First class kail wood in planks	10 cudm	310.00
1199	Sal wood in scantling	10 cudm	600.00
1208	Bitumen washer	100 Nos	30.00
1209	G.I. plain washer thick	100 Nos	35.00
1213	Water proofing materials	kilogram	35.00
1215	Welding by electric plant	cm	2.00
1301	Bleaching powder	quintal	1750.00
1314	C.P.brass chain with 32 mm dia rubber plug	each	40.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	40.00
1880	Dismenteled P or S trap scrap (approx wt 2kg)	kg	22.00
1890	Centrifugally SCI(spun) S & S P or S trap	each	300.00
1953	Vitreous china Indian type W.C. pan of size 580 mm	each	450.00
1954	Vitreous china orrisa type W.C. pan of size 580 mm	each	780.00
1970	Vitreous china foot rests 250x125x25 mm	pair	100.00
2201	Carriage of Bricks	1000 Nos	276.72
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	103.77
2203	Carriage of Coarse sand	cum	103.77
2204	Carriage of Timber	cum	118.59
2205	Carriage of Steel	tonne	92.24
2209	Carriage of Cement	tonne	92.24
2216	Carriage of Stone blocks white & red sand stone & kota stone slab	tonne	92.24
2264	Carriage of Rubbish	cum	103.77
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	286.00
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm)	sqm	490.00
2466	Hollock wood in scantling	10 cudm	340.00
2467	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mm x 42 mm with screws, bolts, nuts and washers complete	each	165.00
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	4500.00
4009	Mild steel tubes hot finished welded type	kilogram	42.00
4202	Red oxide Zinc chromate primer	litre	65.00
7019	Dash fastener / Chemical fastener	each	15.00
7241	Melamine polish	litre	290.00
7346	Double coupler	each	48.00
7387	Spigot for standard jointing	kilogram	45.00
7397	Base Jack	each	150.00
7398	Challies	each	800.00
7399	Cup locks	each	50.00
7442	Wheel 75 mm dia. 40 mm wide	each	65.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7752	PVC slotted pipe 200 mm dia as per IS: 12818	metre	700.00
8500	Water for jetting / blowback	1000 litre	1500.00
8505	Acrylic exterior paint	litre	170.00
8506	Premium Acrylic exterior paint	litre	203.00
8507	Textured exterior paint	litre	230.00
8508	Primer for cement paint	litre	70.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 14.0 REPAIRS TO BUILDING

Code No.	Description	Unit	Rate ₹
14.1	Repairs to plaster of thickness 12 mm to 20 mm in patches of area 2.5 sq. meters and under, including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete, including disposal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.		
14.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	sqm	264.80
14.1.2	With cement mortar 1:4 (1cement: 4 coarse sand)	sqm	274.80
14.2	Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts, embedding hold fasts in cement concrete blocks of size 15 x 10 x 10 cm with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete, including disposal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.		
14.2.1	Door chowkhats	each	852.70
14.2.2	Window chowkhats	each	529.50
14.2.3	Clerestory window chowkhats	each	387.10
14.3	Fixing chowkhat in existing opening in brick/ RCC wall with dash fasteners/ Chemical fasteners of appropriate size (3 nos on each vertical member of door chowkhat and 2 nos on each vertical member of window chowkhats), including Cost of dash fasteners/ chemical fastener.	each	157.95
14.4	Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete, to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground, all complete as per directions of Engineer-In-Charge.		
14.4.1	For door/ window/ clerestory window	sqm	546.25
14.5	Renewing glass panes, with putty and nails wherever necessary including racking out the old putty:		
14.5.1	Float glass panes of thickness 4 mm	sqm	637.90
14.5.2	Float glass panes of thickness 5.5 mm	sqm	898.55
14.6	Renewing glass panes, with wooden fillets wherever necessary:		
14.6.1	Float glass panes of thickness 4 mm	sqm	852.60
14.6.2	Float glass panes of thickness 5.5 mm	sqm	1113.25
14.7	Renewing glass panes and refixing existing wooden fillets:		
14.7.1	Float glass panes of thickness 4 mm	sqm	688.65
14.7.2	Float glass panes of thickness 5.5 mm	sqm	949.30
14.8	Supplying and fixing new wooden fillets wherever necessary:		
14.8.1	2nd class teak wood fillets	metre	38.65
14.8.2	Hollock wood fillets	metre	34.20



Code No.	Description	Unit	Rate ₹
14.9	Renewal of old putty of glass panes (length)	metre	25.45
14.10	Refixing old glass panes with putty and nails	sqm	330.75
14.11	Fixing old glass panes with wooden fillets (excluding cost of fillets)	sqm	295.05
14.12	Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab, including cutting chase, anchoring clamp to reinforcement bar, including cleaning, refilling, making good the chase with matching concrete, plastering and painting the exposed portion of the clamps complete.	each	259.50
14.13	Regrading terracing of mud phaska covered with tiles or brick, in cement by dismantling tiles or bricks, removing mud plaster, preparing the surface of mud phaska to proper slope, relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand), including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded), all complete as per directions of Engineer-In-Charge.	sqm	314.10
14.14	Replacing sand stone slabs in roofing, laid in cement mortar 1:4 (1 cement : 4 coarse sand), including necessary repairs and cement pointing with same mortar complete, including disposal of rubbish to dumping ground, all complete as per directions of Engineer-In-Charge.		
14.14.1	Red/ white sand stone slabs 30 to 50 mm thick	sqm	659.10
14.15	Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.		
14.15.1	Sal wood battens	cum	76828.35
14.16	Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete, including removal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.		
14.16.1	Not exceeding 4.00 metres in length.		
14.16.1.1	Sal wood beams	cum	79341.25
14.16.1.2	Hollock wood beams	cum	48223.75
14.16.2	Above 4.00 metres and upto 5.00 metres length.		
14.16.2.1	Sal wood beams	cum	80485.90
14.16.2.2	Hollock wood beams	cum	49336.15
14.17	Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering, including disposal of rubbish to the dumping ground, all complete as per directions of Engineer-In-Charge.	sqm	29.65
14.18	Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :		
14.18.1	With F.P.S. brick tiles	sqm	62.95
14.18.2	With modular brick tiles	sqm	64.00

Code No.	Description	Unit	Rate ₹
14.19	Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.	kg	2.25
14.20	Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.	metre	74.40
14.21	Renewing bottom rail and/or top runner of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	144.10
14.22	Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.		
14.22.1	Wheel 50 mm dia and below	per wheel	122.65
14.22.2	Wheel above 50 mm dia	per wheel	187.25
<b>EARTH WORK</b>			
14.23	Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.	kilo litre	104.30
14.24	Mud mortar made with local clay good earth.	cum	533.20
<b>BRICK WORK</b>			
14.25	Brick work with common burnt clay bricks of class designation 7.5 in mud mortar	cum	3972.20
<b>WOOD WORK</b>			
14.26	Providing and fixing 25 mm thick shutters for cup board etc. :		
14.26.1	Panelled or panelled & glazed shutters :		
14.26.1.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3492.55
14.26.1.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	2954.85
14.26.2	Glazed shutters :		
14.26.2.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3563.10
14.26.2.2	Ist class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	2985.05
14.27	Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10 mm laths placed 35 mm apart (frames to be paid separately), including fixing 50x12 mm beading complete with :		
14.27.1	Second class teak wood	sqm	2837.20

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
14.28	Providing and fixing brass curtain rods of wall thickness 1.25 mm with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
14.28.1	20 mm diameter.	metre	222.10
14.28.2	25 mm diameter.	metre	245.35
14.29	Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.	kg	61.80
14.30	Providing joists (karries) including hoisting, fixing in position and applying wood preservative on unexposed surface etc. complete with :		
14.30.1	Sal wood	cum	75873.50
14.30.2	Hollock wood	cum	45070.55
14.31	Providing and fixing bright finished brass single acting spring hinges with necessary brass screws etc. complete :		
14.31.1	150 mm	each	586.65
14.31.2	125 mm	each	398.45
14.31.3	100 mm	each	349.70
14.32	Providing and fixing bright finished brass double acting spring hinges with necessary brass screws etc. complete :		
14.32.1	150 mm	each	630.75
14.32.2	125 mm	each	528.55
14.32.3	100 mm	each	477.45
14.33	Providing and fixing bright finished brass flush bolts with necessary brass screws etc. complete :		
14.33.1	250 mm	each	193.25
14.33.2	150 mm	each	168.10
14.33.3	100 mm	each	121.65
14.34	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, necessary brass screws etc. to suit shutter thickness complete	each	211.15
14.35	Providing and fixing bright finished brass hard drawn hooks and eyes :		
14.35.1	300 mm	each	79.05
14.35.2	250 mm	each	77.35
14.35.3	200 mm	each	72.10
14.35.4	150 mm	each	55.85
14.35.5	100 mm	each	50.05
14.36	Providing and fixing bright finished brass fan light pivot with necessary brass screws etc. complete.	each	35.25

Code No.	Description	Unit	Rate ₹
14.37	Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary brass screws etc. complete.	each	56.95
14.38	Providing and fixing bright finished brass quadrant stay 300 mm long with necessary brass screws etc. complete.	each	155.65
14.39	Providing and fixing bright finished brass helical door spring (superior quality).	each	404.55
14.40	Providing and fixing chromium plated brass butt hinges with necessary chromium plated brass screws etc. complete.		
14.40.1	125x70x4 mm (ordinary type)	each	156.95
14.40.2	100x70x4 mm (ordinary type)	each	128.85
14.40.3	75x65x4 mm (heavy type)	each	146.15
14.40.4	75x40x2.5 mm (ordinary type)	each	83.40
14.40.5	50x40x2.5 mm (ordinary type)	each	35.85
14.41	Providing and fixing 85x42 mm chromium plated brass pull bolt lock with necessary chromium plated brass screws, nuts, bolts and washers etc. complete.	each	205.95
	<b>FINISHING</b>		
14.42	White washing with lime to give an even shade :		
14.42.1	Old work (two or more coats)	sqm	10.25
14.42.2	Old work (one or more coats)	sqm	6.30
14.43	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	8.35
14.44	Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.	sqm	30.05
14.45	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
14.45.1	Old work (one or more coats)	sqm	33.35
14.46	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	sqm	10.80
14.47	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
14.47.1	Old work (one or more coats)	sqm	43.60
14.48	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :		
14.48.1	75 mm diameter pipes	metre	26.85
14.49	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :		
14.49.1	75 mm diameter pipes	metre	13.00

Code No.	Description	Unit	Rate ₹
	14.49.2 100 mm diameter pipes	metre	17.15
	14.49.3 150 mm diameter pipes	metre	24.60
14.50	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :		
	14.50.1 75 mm diameter pipes	metre	27.60
	14.50.2 100 mm diameter pipes	metre	38.75
	14.50.3 150 mm diameter pipes	metre	57.75
14.51	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :		
	14.51.1 75 mm diameter pipes	metre	13.55
	14.51.2 100 mm diameter pipes	metre	17.45
	14.51.3 150 mm diameter pipes	metre	25.00
14.52	Painting with oil type wood preservative of approved brand and manufacture:		
	14.52.1 Old work (one or more coats)	sqm	24.80
14.53	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
	14.53.1 One or more coats on old work	sqm	55.25
14.54	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
	14.54.1 One or more coats on old work	sqm	51.30
14.55	Painting with aluminium paint of approved brand and manufacture to give an even shade:		
	14.55.1 One or more coats on old work	sqm	44.40
14.56	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
	14.56.1 One or more coats on old work	sqm	55.75
14.57	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
	14.57.1 One or more coats on old work	sqm	43.55
14.58	French spirit polishing :		
	14.58.1 One or more coats on old work	sqm	105.85
14.59	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
	14.59.1 Old work	sqm	46.95
14.60	Re-lettering with black Japan paint of approved brand and manufacture.	Per letter per cm height	1.70

Code No.	Description	Unit	Rate ₹
14.61	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	44.80
14.62	Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin:		
14.62.1	32 mm dia	each	62.65
14.62.2	40 mm dia	each	62.65
14.63	Distempering with 1st quality acrylic washable distemper (ready made) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
14.63.1	One or more coats on old work	sqm	29.80
14.64	Finishing walls with water proofing cement paint of required shade :		
14.64.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.	sqm	55.70
14.64.2	Old work (one or more coats @ 2.20 kg/10 sqm) complete.	sqm	37.90
14.65	Finishing walls with textured exterior paint of required shade :		
14.65.1	Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm.	sqm	124.75
14.65.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	76.20
14.66	Finishing walls with Acrylic Smooth exterior paint of required shade:		
14.66.1	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface	sqm	68.95
14.66.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	45.35
14.67	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
14.67.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface	sqm	70.75
14.67.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	sqm	47.25
14.69	Varnishing with varnish of approved brand and manufacture:		
14.69.1	One or more coats with copal varnish	sqm	46.95
14.69.2	One or more coats with spar varnish	sqm	47.50
14.70	Melamine polishing on wood work (one or more coat).	sqm	79.50
14.71	Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.	sqm	47.20
14.72	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The		

Code No.	Description	Unit	Rate ₹
	scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding.	sqm	160.15
	<b>Note:</b> - This item to be used for maintenance work judicially, necessary deduction for scaffolding in the existing item to be done.		
14.73	Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.	kg	420.20
14.74	Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.	each	49.20
14.75	<b>Repair to plaster of thickness 12mm to 20 mm in patches of area 2.5 sqm and under, including cutting the patch in proper shape, raking out joints and preparing plastering the wall surface with white cement based polymer modified self curing mortar, including disposal of rubbish, all complete as per the direction of Engineer-In- Charge.</b>	sqm	368.90
	<b>ROUTINE MAINTENANCE WORK</b>		
14.75A	<b>Cleaning of terrace/loft water storage tank (inside surface area) upto 2000 litre capacity at all heights with coconut brushes, duster etc., removal of silt, rubbish from the tank and cleaning the tank with fresh water disinfecting with bleaching powder @ 0.5gm per litre capacity of tank, including marking the date of cleaning on the side of tank body with the help of stencil and paint and disposing of malba, all complete as per direction of Engineer-in-Charge. (The old date already written on tank should be removed with paint remover or black paint and if date is not written with the stencil or old date is not removed deduction will be made @ Rs. 0.10 per litre if during cleaning any GI fittings or ball cock is damaged that is to be repaired by contractor at his own cost and nothing extra will be paid on this account)</b>	litre	0.20
14.76	<b>Cleaning and desilting of gully trap chamber, including removal of rubbish mixed with earth etc. and disposal of same, all as per the direction of Engineer-in-charge.</b>	each	47.55
14.77	<b>Cleaning of chocked sewer line by diesel running vehicle mounting hydraulic operated high pressure suction cum jetting sewer cleaning machine fitted with pump having 4000 litres suction capacity and 6000 litres water jetting tank capacity including skilled operator, supervising engineer etc. for cleaning and partial desilting of manholes and dechocking of sewer lines. Dechocking and flushing of sewer line from one manhole to another by high pressure jetting system of 2200 PSI for sewer line from 150mm dia upto 300mm dia for all depth.</b>	metre	217.80

Code No.	Description	Unit	Rate ₹
14.78	<p>Cleaning of under ground sump, Over Head R.C.C. Tank ( independent staging) including disposal of slit and rubbish, all as per direction of Engineer-in-Charge. The cleaning shall consist following operations:-</p> <p>(i) Tank shall be emptied of water by pumping &amp; bottom shall be cleaned of slit and other deposits.</p> <p>(ii) Entire surface area of the sump shall then scrubbed thoroughly with wire brush etc. and pressure washed with water.</p> <p>(iii) Chlorination of RCC internal surface by liquid chlorine.</p> <p>(iv) The treated surface shall be dried using air jetting and all loose particles shall be removal from the surface.</p> <p>(v) Finally the surface shall be treated with ultraviolet radiation etc. as per direction of Engineer-in-Charge.</p>	sqm	40.70
14.79	Disconnecting damaged overhead/terrace PVC water storage tank of any size from water supply line and removing from the terrace including shifting at ground level as per direction of Engineer-in- charge.	each	182.45
14.80	Providing & fixing White vitreous china water closet squatting pan (Indian type) along with "S" or "P" trap including dismantling of old WC seat and "S" or "P" trap at site complete with all operations including all necessary materials, labour and disposal of dismantled material i/c malba, all complete as per the direction of Engineer-in charge.		
14.80.1	Long pattern W.C Pan of size 580x440 mm	each	1892.80
14.80.2	Orissa pattern W.C Pan of size 580x440 mm	each	2127.85
14.81	Cutting holes of required size in brick masonry wall for fixing of exhaust fan including providing and fixing 300 mm dia PVC pipe conforming BIS-12818 and making good the same etc. complete as per direction of Engineer-in-charge.	each	138.40
14.82	Dismantling W.C. Pan of all sizes including disposal of dismantled materials i/c malba all complete as per directions of Engineer-in- Charge.	each	55.45
14.83	Hacking of CC flooring including cleaning for surface etc. complete as per direction of the Engineer-in-Charge.	sqm	1.50
14.84	Dismantling 15 to 40 mm dia G.I. pipe including stacking of dismantled pipes within 50 metres lead as per direction of Engineer- in-Charge. (a) Internal Work - Exposed on wall	metre	2.00
14.85	Taking out existing wooden door shutter, repair by cutting, painting etc. and refixing of repaired door shutters to existing door frames, including replacement of hinges with screws, etc. as required, all complete as per the direction of the Engineer-in-charge.	each	176.40



**SUB HEAD : 15.0**

**DISMANTLING  
AND  
DEMOLISHING**

**BASIC RATES (SH:15.0 DISMANTLING AND DEMOLISHING)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0038	Tractor with ripper attachment	day	1100.00
0039	Tractor with trolley	day	1250.00
0040	Air compressor 250 cfm with two leads for pneumatic cutters / hammers	day	1500.00
0041	Joint cutting machine with 2-3 blades	day	750.00
0100	Bandhani	day	407.00
0101	Bhisti	day	407.00
0103	Blacksmith 2nd class	day	448.00
0112	Carpenter 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0117	Assistant Fitter or 2nd class Fitter	day	448.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0128	Mate	day	407.00
0130	Mistry	day	487.00
0139	Skilled Beldar (for floor rubbing etc.)	day	407.00
0761	Fuel wood	quintal	500.00
0771	Kerosene oil	litre	45.00
2264	Carriage of Rubbish	cum	103.77
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 15.0 DISMANTLING AND DEMOLISHING

Code No.	Description	Unit	Rate ₹
15.1	Demolishing lime concrete manually/ by mechanical means and disposal of material within 50 metres lead as per direction of Engineer-in-charge.	cum	348.30
15.2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.		
15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	997.05
15.2.2	Nominal concrete 1:4:8 or leaner mix (i/c equivalent design mix)	cum	615.15
15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	1454.55
15.4	Demolishing R.B. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in- charge.	cum	1300.25
15.5	Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer-in-charge.	sqm	500.80
15.6	Extra for scrapping, cleaning and straightening reinforcement from R.C.C. or R.B. work.	kg	3.90
15.7	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.		
15.7.1	In mud mortar	cum	288.45
15.7.2	In lime mortar with old mughal bricks	cum	728.70
15.7.3	In lime mortar	cum	348.30
15.7.4	In cement mortar	cum	842.75
15.8	Removing mortar from bricks and cleaning bricks including stacking within a lead of 50 m (stacks of cleaned bricks shall be measured):		
15.8.1	From brick work in mud mortar	1000 nos	1921.50
15.8.2	From brick work in lime mortar	1000 nos	2229.55
15.8.3	From brick work in cement mortar	1000 nos	2798.60
15.9	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
15.9.1	In lime mortar	cum	474.10
15.9.2	In cement mortar	cum	1005.70

Code No.	Description	Unit	Rate ₹
15.10	Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/ by mechanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
	15.10.1 In lime mortar	cum	599.60
	15.10.2 In cement mortar	cum	1176.65
15.11	Removing mortar from and cleaning stones and concrete articles (net quantity of stacks of cleaned materials will be measured):		
	15.11.1 In lime mortar	cum	198.05
	15.11.2 In cement mortar	cum	284.30
15.12	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :		
	15.12.1 Of area 3 sq. metres and below	each	157.85
	15.12.2 Of area beyond 3 sq. metres	each	216.40
15.13	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead :		
	15.13.1 Of area 3 sq. metres and below	each	61.25
	15.13.2 Of area beyond 3 sq. metres	each	81.00
15.14	Dismantling wood work in frames, trusses, purlins and rafters up to 10 metres span and 5 metres height including stacking the material within 50 metres lead :		
	15.14.1 Of sectional area 40 square centimetres and above	cum	1922.45
	15.14.2 Of sectional area below 40 square centimetres	metre	7.70
15.15	Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional span of one metre or part thereof beyond 10 metres :		
	15.15.1 Of sectional area 40 square centimetres and above	Cum per metre span	259.20
	15.15.2 Of sectional area below 40 square centimetres	Metre per metre span	0.75
15.16	Extra for dismantling trusses, rafters, purlins etc. of wood work for every additional height of one metre or part thereof beyond 5 metres :		
	15.16.1 Of sectional area 40 square centimetres and above	Cum per metre height	370.70
	15.16.2 Of sectional area below 40 square centimetres	Metre per metre height	1.45
15.17	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:		
	15.17.1 R.S. Joists	kg	1.40
	15.17.2 Channels, angles, tees and flats	kg	0.95

Code No.	Description	Unit	Rate ₹
15.18	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.	kg	2.40
15.19	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.	kg	1.60
15.20	Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres	Kg per metre span	0.35
15.21	Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional height of one metre or part thereof beyond 5 metres.	Kg per metre height	0.35
15.22	Extra for marking of structural steel work required to be re-erected.	kg	2.00
15.23	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.		
	15.23.1 For thickness of tiles 10 mm to 25 mm	sqm	31.55
	15.23.2 For thickness of tiles above 25 mm and up to 40 mm	sqm	49.20
15.24	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :	cum	539.80
15.25	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	109.35
15.26	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	45.70
15.27	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	cum	373.95
15.28	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of:		
	15.28.1 G.S. Sheet	sqm	70.10
	15.28.2 Asbestos sheet	sqm	32.85
15.29	Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately), including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	cum	1093.30
15.30	Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	104.20
15.31	Dismantling tiled roofing with battens, boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	86.25
15.32	Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	23.80

Code No.	Description	Unit	Rate ₹
15.33	Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.	metre	8.55
15.34	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of:		
	15.34.1 T' or 'L' iron or pipe	each	104.65
	15.34.2 R.C.C.	each	116.20
15.35	Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.	each	8.35
15.36	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	15.05
15.37	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	27.10
15.38	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	31.70
15.39	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :		
	15.39.1 Up to 10 mm thick	sqm	25.95
	15.39.2 Thickness above 10 mm up to 25 mm	sqm	33.15
	15.39.3 Thickness above 25 mm up to 40 mm	sqm	38.75
15.40	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead :		
	15.40.1 Thickness up to 40 mm	sqm	119.95
	15.40.2 Thickness above 40 mm up to 75 mm	sqm	179.70
15.41	Dismantling cement asbestos or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	sqm	24.30
15.42	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		
	15.42.1 75 to 80 mm dia pipe	metre	30.95
	15.42.2 100 mm dia pipe	metre	31.95
	15.42.3 150 mm dia pipe	metre	32.90
15.43	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge :		
	15.43.1 Water bound macadam road	sqm	90.50
	15.43.2 bituminous road	sqm	177.00

Code No.	Description	Unit	Rate ₹
15.44	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :		
15.44.1	15 mm to 40 mm nominal bore	metre	63.65
15.44.2	Above 40 mm nominal bore	metre	70.85
15.45	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-charge:		
15.45.1	Up to 150 mm diameter	metre	183.05
15.45.2	Above 150 mm dia up to 300 mm dia	metre	242.05
15.45.3	Above 300 mm diameter	metre	314.40
15.46	Dismantling steel cylinder R.C. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metres lead as per direction of Engineer-in-charge :		
15.46.1	Up to 600 mm diameter	metre	299.10
15.46.2	Above 600 mm diameter	metre	752.85
15.47	Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge :		
15.47.1	Up to 150 mm diameter	metre	135.70
15.47.2	Above 150 mm diameter	metre	164.80
15.48	Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.	each	290.55
15.49	Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead as per direction of Engineer-in-charge.	each	170.15
15.50	Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	1947.25
15.51	Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead including refilling the excavated gap.	each	397.15

Code No.	Description	Unit	Rate ₹
15.52	Dismantling of flushing cistern of all types (C.I./PVC/Vitrious China) including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	391.20
15.53	Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres		
	15.53.1 Up to 150 mm diameter	each	141.15
	15.53.2 Above 150 mm diameter	each	507.45
15.54	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	307.85
15.55	Dismantling of cement concrete platform along with curtain walls and base concrete etc. including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead :		
	15.55.1 120 x 120 cm (outside to outside)	each	451.65
	15.55.2 210 x 120 cm (outside to outside)	each	692.85
	15.55.3 320 x 120 cm (outside to outside)	each	980.55
15.56	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	22.40
15.57	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.	sqm	24.30
15.58	Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	cum	1337.40
15.59	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	cum	204.50
15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	cum	120.55



**SUB HEAD : 16.0**

**ROAD WORK**

### BASIC RATES (SH: 16.0 ROAD WORK)

Code No.	Description	Unit	Rate ₹
0001	Hire charges of Coaltar Boiler 900 to 1400 litres	day	800.00
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with Hopper	day	800.00
0003	Hire charges of Diesel Road Roller - 8 to 10 tonne	day	2200.00
0004	Production cost of concrete by batch mix plant	cum	400.00
0007	Hire charges of Coaltar Sprayer	day	250.00
0008	Hire charges of Barber green, drying, mixing and asphalt plant, with accessories, capacity 30/45 tonne	day	7700.00
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	200.00
0012	Vibrator (Needle type 40 mm)	day	350.00
0013	Machine for rubbing of floors	day	350.00
0014	Front end loader capacity 1.00 cum	day	6000.00
0016	Mastic cooker	day	750.00
0017	Hire and running charges of tipper	day	1800.00
0018	Hire and running charges of loader	day	6000.00
0021	Pin vibrator	day	250.00
0022	Surface Vibrator	day	250.00
0023	Hot Bitumen Mixer 0.5 cum i/c hand cart	day	3500.00
0029	Carriage of concrete by transit mixer	km/cum	23.00
0030	Generator 250 KVA	day	2500.00
0033	Paint applicator	day	800.00
0038	Tractor with ripper attachment	day	1100.00
0041	Joint cutting machine with 2,3 blades	day	750.00
0042	CC batch mix plant	day	10000.00
0043	Road sweeper	day	550.00
0045	Slip form paver with sensor	day	13000.00
0046	Water tanker 5000 litre	day	1100.00
0047	Concrete joint cutting machine	day	900.00
0048	Texturing machine	day	925.00
0049	Dozer D-80-A12	hour	2000.00
0050	Motor Grader 3.35 metre blade	hour	2100.00
0051	Hydraulic Excavator of 1 cum bucket	hour	800.00
0052	Front end loader 1 cum bucket capacity (incl POL)	hour	800.00
0053	Tipper-5 Cum	tonne km	3.00
0054	Vibratory roller 8 to 10 tonne	hour	650.00
0055	Smooth Wheeled Roller 8 to 10 tonne	hour	200.00
0056	Tandem Road Roller	hour	1150.00
0057	Water Tanker 5 to 6 KL capacity	hour	200.00
0058	Air compressor	hour	200.00
0059	Wet Mix Plant 60 TPH	hour	750.00
0060	Mechanical Broom hydraulic	hour	200.00

Code No.	Description	Unit	Rate ₹
0061	Emulsion Pressure Distributor @ 1750 sqm per hour	hour	800.00
0062	Hot mix Plant -120 TPH capacity	hour	15000.00
0063	Hot mix Plant 100 TPH Capacity	hour	13000.00
0064	Paver finisher Hydrostatic with sensor control 100 TPH	hour	1500.00
0065	Paver finisher Mechanical 100 TPH	hour	700.00
0066	Batching and Mixing Plant @ 75 cum per hour	hour	2500.00
0068	Concrete paver finisher with 40 HP motor and sensor	hour	2500.00
0069	Generator 250 KVA	hour	400.00
0070	Generator 100 KVA/125 KVA	hour	300.00
0071	Truck 5.5 cum/10tonne	tonne km	3.00
0075	Road sweeper (Mechanical Broom) @ 1250 sqm per hour	hour	300.00
0076	Drum Type HMP of 60-90 TPH capacity @ 75 tonne per hour actual output	hour	11000.00
0083	Hire charges of TATA 407 or equivalent for local shifting.	day	1400.00
0100	Bandhani	day	407.00
0101	Bhisti	day	407.00
0102	Blacksmith 1st class	day	487.00
0103	Blacksmith 2nd class	day	448.00
0113	Chowkidar	day	368.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0125	Mason (for plain stone work) 2nd class	day	448.00
0126	Mason (for ornamental stone work) 1st class	day	487.00
0128	Mate	day	407.00
0130	Mistry	day	487.00
0131	Painter	day	448.00
0138	Sprayer (for bitumen, tar etc.)	day	407.00
0139	Skilled Beldar (for floor rubbing etc.)	day	407.00
0155	Mason (average)	day	467.00
0157	Operator (Pile/ Special machine)	day	487.00
0286	Brick Aggregate (Single size) : 50 mm nominal size	cum	750.00
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	750.00
0291	Stone Aggregate (Single size) : 63 mm nominal size	cum	1150.00
0292	Stone Aggregate (Single size) : 50 mm nominal size	cum	1150.00
0293	Stone Aggregate (Single size) : 40 mm nominal size	cum	1250.00
0294	Stone Aggregate (Single size) : 25 mm nominal size	cum	1250.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	1300.00
0296	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	1300.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	1300.00

Code No.	Description	Unit	Rate ₹
0298	Stone Aggregate (Single size) : 06 mm nominal size	cum	1300.00
0304	Bajri	cum	1200.00
0309	Paving bitumen of grade VG-10 of approved quality	tonne	29600.00
0310	Bitumen emulsion	tonne	26395.00
0312	Bitumen grade PMB - 40	tonne	38550.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	34561.00
0314	Bitumen hot sealing compound : grade A	kilogram	28.00
0316	Bitumen solution primer of approved quality	litre	50.00
0317	Premoulded joint filler 12 mm thick	sqm	303.00
0323	seperation membrane of impermeable plastic sheeting 125 micron thick	sqm	12.00
0349	Curing compound	litre	30.00
0364	Wire brush	each	20.00
0365	Soft brush	each	18.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0369	Plastic sheath, 1.25 mm thick for dowel bars	sqm	30.00
0370	Coal (steam)	quintal	400.00
0371	Sealant primer	kilogram	125.00
0374	Pre moulded joint filler, 25 mm thick for expansion joint	sqm	450.00
0588	Chromium plated Brass screws 25 mm	100 Nos	190.00
0773	Unslaked lime	quintal	270.00
0777	Dry hydrated lime (factory made)	quintal	280.00
0784	Marble dust/ powder	cum	1000.00
0810	Moorum	cum	450.00
0979	Royalty for good earth	cum	30.00
0982	Coarse sand (zone III)	cum	1200.00
0983	Fine sand (zone IV)	cum	760.00
1003	Mild steel round bar above 12 mm dia	quintal	3575.00
1005	Twisted steel/deformed TMT bars Fe-500D	quintal	3730.00
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	3775.00
1008	Flats up to 10 mm in thickness	quintal	3675.00
1013	Mild steel sheets of 1.00 mm thickness for tanks	quintal	3775.00
1021	Hard drawn steel wire fabric size 75 X 25 mm mesh of weight not less than 7.75 kg/sq.m	sqm	400.00
1028	Straining bolts	each	65.00
1029	Galvanised steel barbed wire of weight 9.8kg/100m	quintal	4800.00
1030	Galvanised steel turn buckles	each	15.00
1151	Boundary stone top chisel dressed 15x15x90 cm	each	70.00
1158	Stone for pitching 15 cm x 22.5 cm	cum	636.00
1159	Stone dust	cum	865.00
1179	Crushed stone 2.36 mm to 12.5 mm size	cum	900.00
1215	Welding by electric plant	cm	2.00
1235	Diesel	litre	46.55

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
1241	Commercial LPG in cylinder	kg	65.00
1980	Fly ash	cum	8.00
2200	Carriage of Steam coal	tonne	118.59
2201	Carriage of Bricks	1000 Nos	276.72
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	103.77
2203	Carriage of Coarse sand	cum	103.77
2205	Carriage of Steel	tonne	92.24
2206	Carriage of Stone aggregate 40 mm nominal size and above	cum	112.79
2208	Carriage of Lime	cum	103.77
2209	Carriage of Cement	tonne	92.24
2211	Carriage of Tar / Bitumen	tonne	103.77
2215	Carriage of Soling stone & masonry stone	cum	122.08
2216	Carriage of Stone blocks white & red sand stone & kota stone slab	tonne	92.24
2241	Carriage of Good earth	cum	129.71
2260	Carriage of Brick aggregate	cum	112.79
2261	Carriage of Fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	103.77
2265	Carriage of Moorum	cum	103.77
2266	Carriage of Surkhi	cum	103.77
2267	Carriage of Stone dust	cum	103.77
2302	Carriage of G.I. sheet and accessories	tonne	92.24
2311	Carriage of Red bajri	cum	103.77
2314	Carriage of Barbed wire	tonne	92.24
2335	Carriage of Jamuna sand	cum	103.77
2342	Carriage of Solvent / Diesel.	quintal	10.38
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	4500.00
2704	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	225.00
2901	Stone Aggregate (Single size): 100 mm nominal size	cum	1000.00
2902	Stone Aggregate (Single size): 80 mm nominal size	cum	1000.00
2903	Stone chippings/ screenings 4.75 mm nominal size	cum	1150.00
2904	Stone chippings/ screenings 150 micron nominal size	cum	1150.00
2908	Over burnt (Jhama) Brick Aggregate: 120 mm to 40 mm size	cum	450.00
2909	Over burnt (Jhama) Brick Aggregate: 90 mm to 40 mm size	cum	470.00
2910	Stone chippings/ screenings 12.5/ 13.2 mm nominal size	cum	1200.00
2911	Stone chippings/ screenings 10/ 11.2 mm nominal size	cum	1200.00
2914	Solvent	kilogram	25.00
2916	Paving Asphalt VG 10 of approved quality	tonne	29600.00
5001	Mobile oil	litre	245.00
6501	Sand zone V (Jamuna)	cum	600.00
7254	Hardening compound	litre	40.00
7255	Road marking paint (spirit based)	litre	120.00
7256	Superior quality road marking paint (water based)	litre	140.00

Code No.	Description	Unit	Rate ₹
7280	Waste plastic additive	tonne	40000.00
7295	Granite of any colour, 18 mm thick (slab area upto 0.50 sqm)	sqm	1750.00
7296	Granite of any colour, 30 mm thick (slab area upto 0.50 sqm)	sqm	2000.00
7309	Paving Asphalt of grade VG-30 of approved quality	tonne	30516.00
7318	Plasticizer / super plasticizer	kilogram	38.00
7382	Bitumen emulsion rapid setting (R.S.) confirming to IS : 8887	tonne	25425.00
7426	Cat's eye	each	105.00
7739	Modified Bitumen Refinery produced CRMB - 55	tonne	33548.00
7741	Modified Bitumen Refinery produced CRMB - 60	tonne	34006.00
7742	Bitumen emulsion medium setting (M.S.) confirming to IS : 8887	tonne	25654.00
7753	Boulder 50 mm to 200 mm	cum	700.00
7773	Coloured inter locking C.C. paver Block (60mm thick, M-35)	sqm	500.00
7774	Granite Stone size 10x10x7.50cm	each	9.00
7893	Tactile tile	sqm	900.00
7895	Matt finished vitrified tile 100x100 x16 mm	sqm	377.00
7896	Vitrified tile	sqm	309.00
8576	Crates made of Mesh type 10x12 (D=100 mm) Zn coated. (Mesh wire diameter 3.00 mm).	sqm	190.00
8577	Crates made of Mesh type 10x12 (D=100 mm) Zn+PVC coated. Mesh wire diameter 2.70/3.70 mm (ID/OD).	sqm	220.00
8578	Crates made of Mesh type 10x12 (D=100 mm) Zn+10% Al alloy + PVC coated. Mesh wire diameter 2.70/3.70 mm (ID/OD).	sqm	290.00
8685	Delineator	each	275.00
8686	Precast C.C. Kerb stone M - 25	cum	3800.00
8687	Thermoplastic paint	kg	47.00
8688	Glass beads	kg	60.00
8689	Interlocking C.C. paver block ( 60 mm thick, M-30)	sqm	350.00
8690	High intensity retro - reflective sheet	sqm	1525.00
8691	Punched tape concertina coil 600 mm dia 10 m openable length (Total length 90 m)	bundle	675.00
8692	RBT reinforced barbed wire	metre	7.00
8693	Turn buckle and strengthening bolt	each set	40.00
8694	Precast pavement slab 450 x 450 x 50 mm (M - 30)	each	70.00
8695	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm	sqm	258.00
8696	Chain link fabric fencing mesh of size 50x50 mm made of G.I. wire of dia 4 mm, PVC coated to outer dia 5 mm	sqm	285.00
8697	Chain link fabric fencing mesh of size 25x25 mm made of G.I. wire of dia 3 mm	sqm	285.00
8785	Interlocking C.C. paver block ( 80 mm thick, M-30)	sqm	370.00
9977	Carriage	L.S.	1.73
9999	Sundries	L.S.	1.73

## 16.0 ROAD WORK

Code No.	Description	Unit	Rate ₹
<b>ROADS</b>			
16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	sqm	90.10
16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	cum	10.70
16.3	Supplying and stacking at site.		
16.3.1	90 mm to 45 mm size stone aggregate	cum	1336.05
16.3.2	63 mm to 45 mm size stone aggregate	cum	1449.30
16.3.3	53 mm to 22.4 mm size stone aggregate	cum	1542.25
16.3.4	Over burnt (Jhama) brick aggregate 120 mm to 40 mm	cum	653.70
16.3.5	Over burnt (Jhama) brick aggregate 90 mm to 45 mm	cum	676.90
16.3.6	Stone screening 13.2 mm nominal size (Type A)	cum	1505.60
16.3.7	Stone screening 11.2 mm nominal size (Type B)	cum	1462.05
16.3.8	Red bajri	cum	1514.35
16.3.9	Good earth	cum	332.55
16.3.10	Moorum	cum	643.20
16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	449.10
16.5	Laying water bound macadam sub-base with brick aggregate and binding material, earth etc. including screening, sorting and spreading to template and consolidation with light power road-roller etc. complete.(payment for brick aggregate and moorum etc. to be made separately)		
16.5.1	Over burnt (Jhama) brick aggregate 120 mm to 40 mm	cum	363.25
16.5.2	Over burnt (Jhama) brick aggregate 90 mm to 45 mm	cum	363.25
16.6	Supplying, stacking and Spreading 6 mm thick red bajri, watering and rolling complete including preparation of the surface and rolling.		
16.6.1	With road roller/ hand roller	sqm	15.55
16.7	Brick edging in full brick width and half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres.		
16.7.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	127.60

Code No.	Description	Unit	Rate ₹
16.8	Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres :		
16.8.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	36.20
16.9	Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.	sqm	14.45
16.10	Making bajri path including preparation of subgrade, supplying and laying brick aggregate of 50 mm nominal size 7.5 cm deep with blinding material consisting of 12 mm moorum and 12 mm red bajri consolidated with road roller.	sqm	142.50
16.11	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	sqm	499.65
16.12	Dry brick pitching half brick thick in drains including supply of bricks and preparing the surface complete :		
16.12.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	sqm	447.45
16.13	Cutting road and making good the same including supply of extra quantities of materials i.e. aggregate, moorum screening, red bajri and labour required.		
16.13.1	bituminous portion	cum	2384.05
16.13.2	Water bound macadam	cum	1407.15
16.14	Cutting bajri paths and making good the same including supply of extra quantities of brick aggregate, moorum and red bajri required.	sqm	134.55
<b>FENCING</b>			
16.15	Supplying at site :		
16.15.1	R.C.C. Standards post/ struts/rails/ pales of mix 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 12.5 mm nominal size) with wooden plugs or 6mm bar nibs wherever required as per direction of Engineer-in-charge (cost of earth works in excavation, concrete works in foundation to be paid separately).	cum	19774.55
16.15.2	Welded steel wire fabric of required width having rectangular mesh painted with two or more coats of enamel paint of approved shade over a coat of primer (Priming & Painting to be paid for separately).	kg	60.05
16.16	Supplying and fixing turn buckles and straining bolts for barbed wire fencing.	each set	150.45
16.17	Fencing with R.C.C. post placed at required distance, embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post one side only, provided with horizontal lines and two diagonals of barbed wire weighing 9.38 kg per 100 metres (minimum), between the two posts fitted and fixed with G.I. staples on wooden plugs or G.I. binding wire tied to 6 mm bar nibs fixed while casting the post		



Code No.	Description	Unit	Rate ₹
	(cost of R.C.C. posts, struts, earth work and concrete to be paid for separately) :- Payment to be made per metre cost of total length of barbed wire used.		
16.17.1	With G.I. barbed wire	metre	8.25
16.18	Fencing with angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used.		
16.18.1	With G.I. barbed wire	metre	12.65
16.19	Supplying at site Angle iron post & strut of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. etc. complete.	kg	62.05
16.20	Welded steel wire fabric fencing with posts of specified material and of standard design placed and embedded in cement concrete blocks 45x45x 60 cm of mix 1:5:10 (1 cement:5 fine sand : 10 graded stone aggregate 40 mm nominal size), every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and struts embedded in cement concrete blocks 70x45x50 cm of the same mix, provided with welded steel wire fabric fixed between the posts fitted and fixed with G.I. staples on wooden plugs or tied to 6 mm bar nibs with G.I. binding wire (cost of posts, welded steel wire fabric, painting, earth work in excavation and concrete to be paid for separately).	Sqm	30.65
<b>ROAD SIGNS</b>			
16.21	Engraving letters in hard stone	per cm height per letter	4.75
16.22	Providing and fixing 15x15x90 cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides including top (cost of excavation, refilling and concrete etc. to be paid for separately).	each	140.95
16.23	Providing and fixing 15 cm dia at top, 20 cm at bottom and 90 cm high precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) boundary stone as per standard design, including finishing smooth with cement mortar 1:3 (1 cement : 3 fine sand) (cost of excavation, refilling and concreting to be paid for separately).	each	459.10
16.24	Providing and fixing precast reinforced cement concrete 1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) kilometre stone as per standard design, including finishing smooth in 1:3 cement mortar (1 cement : 3 fine sand) but excluding the cost of earth work, concrete in foundation, painting and lettering etc. which shall be paid for separately.		

Code No.	Description	Unit	Rate ₹
16.24.1	35x111x25 cm size	each	1740.85
16.24.2	50x152.5x25 cm size	each	3196.40
16.24.3	35x93.5x18 cm size	each	1172.55
<b>SURFACE DRESSING</b>			
16.25	Surface dressing on new surface with paving bitumen of grade VG - 10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	sqm	139.60
16.26	Surface dressing on new surface in two coats with bitumen of grade VG -10 of approved quality using 1.8 kg of bitumen per sqm with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface for first coat and 1.1 kg. of bitumen per sqm with 1.00 cu. metre of stone chippings 11.2 mm nominal size per 100 sqm of road surface for second coat, including consolidation of each coat separately with road roller of 6 to 8 tonne capacity etc. complete.	Sqm	191.70
16.27	Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.	sqm	112.75
16.28	Surface dressing one coat on new surface with bitumen of specified grade at a rate of 1.95 kg/sqm of surface area with 1.5 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity , etc. complete :		
16.28.1	Using bitumen emulsion (minimum 50% bitumen content- RS grade conforming to IS : 8887)	sqm	114.10
16.29	Surface dressing one coat on old surface with bitumen of specified grade at the rate of 1.22 kg/ sqm of surface area with 1.10 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete :		
16.29.1	Using bitumen emulsion (minimum 50% bitumen content- RS grade conforming to IS : 8887)	sqm	72.95
<b>PREMIX CARPET</b>			
16.30	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :		
16.30.1	On W.B.M. @ 0.75 Kg l sqm	sqm	36.40
16.30.2	On bituminous surface @ 0.50 Kg l sqm	sqm	27.50
16.31	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.		

Code No.	Description	Unit	Rate ₹
16.31.1	With rapid setting bitumen emulsion		
16.31.1.1	On W.B.M / W.M.M. @ 0.4kg/sqm	sqm	13.10
16.31.1.2	On bituminous surface @ 0.25kg/sqm	sqm	8.65
16.31.2	With medium setting bitumen emulsion		
16.31.2.1	On W.B.M / W.M.M. @ 0.4kg/sqm	sqm	13.20
16.31.2.2	On bituminous surface @ 0.25kg/sqm	sqm	8.75
	<b>Note - Use of Item No. 16.81.1 shall be restricted only per site at sub zero temperature or for emergency application</b>		
16.32	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).		
16.32.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	139.85
16.32.2	With paving Asphalt grade VG - 30 with no solvent	sqm	138.45
16.32.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53	sqm	146.45
16.33	2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2 mm and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).		
16.33.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	169.60
16.33.2	With paving Asphalt grade VG - 30 with no solvent	sqm	167.85
16.33.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP: 53	sqm	177.85
16.34	2 cm premix carpet surfacing with 2.4 cum of stone chippings 11.2 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen content) complying with IS : 8887, using 96 kg per cum of chippings, including consolidation with road roller of 6 to 9 tonne capacity etc. complete.	sqm	127.65
16.35	2.5 cm premix carpet surfacing with 3 cum of stone chippings 10 mm nominal size per 100 sqm and bitumen emulsion (medium setting min. 65% bitumen contents) complying with IS : 8887, using 96 kg per cum of chippings of road surface, including consolidation with road roller etc complete .	sqm	154.85
16.36	Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of		

Code No.	Description	Unit	Rate ₹
	suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/ tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy :		
16.36.1	For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10 sqm. With paving asphalt grade VG - 10 @ 50 kg/ 10 sqm.	sqm	342.05
16.36.2	For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt grade VG - 10 @ 68 kg/ 10 sqm.	sqm	496.70
16.37	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS : 702, prepared by using mastic cooker and laid to required level and slope, including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface protruding 1 mm to 4 mm over mastic surface, including cleaning the surface, removal of debris etc. all complete. (Considering bitumen using 10.2% as per MORTH specification).		
16.37.1	25 mm thick	sqm	491.75
16.37.2	40 mm thick	sqm	786.80
16.38	2.5 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand @ 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over a tack coat with hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :		
16.38.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	218.75
16.38.2	With paving Asphalt grade VG - 30	sqm	215.75
16.38.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53	sqm	232.60
16.39	4 cm thick bitumastic sheet with hot bitumen of approved quality, using stone chippings (60% with 12.5 mm nominal size and 40% with 10 mm nominal size) @ 2.60 cum per 100 sqm and coarse sand @ 2.60 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum of sand over a tack coat with		

Code No.	Description	Unit	Rate ₹
	hot straight run bitumen, including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately) :		
16.39.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	sqm	333.20
16.39.2	With paving asphalt grade VG - 30 with no solvent	sqm	328.50
16.39.3	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP : 53	sqm	355.15
<b>SEAL COAT</b>			
16.40	Providing and laying seal coat of premixed fine aggregate ( passing 2.36 mm and retained on 180 micron sieve) with bitumen using 128 kg of bitumen of grade VG - 10 bitumen per cum of fine aggregate and 0.60 cum of fine aggregate per 100 sqm of road surface, including rolling and finishing with road roller all complete.	sqm	59.50
16.41	Providing and laying seal coat over prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade VG - 10 and blinding surface with 0.90 cum of stone aggregate of 6.7 mm size (Passing 11.2 mm sieve and retained on 2.36 mm sieve) per 100 sqm of road surface, including rolling and finishing with power road roller all complete.	sqm	79.85
<b>Note:</b> Seal coat items to be operated only with the prior approval of chief Engineer concerned.			
<b>CONCRETE PAVEMENTS</b>			
16.42	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	cum	5503.80
16.43	"Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints ( 10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in-charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately).		
<b>Note:-</b> Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.			
16.43.1	Cement concrete prepared with batch mixing machine	cum	6893.25
16.43.2	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	cum	7160.40

Code No.	Description	Unit	Rate ₹
16.44	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	litre	46.45
16.45	Providing and fixing in position pre-moulded joint filler in expansion joints.	per cm depth per cm width per m length	2.20
16.46	Providing and laying in position bitumen hot sealing compound for expansion joints etc.		
16.46.1	Using grade 'A' sealing compound.	per cm depth per cm width per m length	2.20
<b>PAINTING AREA / RUNWAY MARKING</b>			
16.47	Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign mater;al etc. and lining out complete.		
16.47.1	New work (Two or more coats)	sqm	104.90
16.47.2	Old work (One or more coats)	sqm	66.25
16.48	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete.		
16.48.1	New work (Two or more coats)	sqm	133.10
16.48.2	Old work (One or more coats)	sqm	86.90
<b>MISCELLANEOUS</b>			
16.49	Making bell mouth opening/ entrance of size 100x50x50 cm for drainage pipe under footpath, including providing cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) for shape of bell mouth, including plastering providing and fixing precast R.C.C./ S.F.R.C. slab including plastering with cement mortar 1:3 (1 cement : 3 fine sand) of 6 mm thickness on exposed surface of the slab & bell mouth including centring, shuttering & neat cement punning inside the bell mouth etc. all complete.	each	1829.70
16.50	Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite ) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degress to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be		

Code No.	Description	Unit	Rate ₹
	tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.	each	159.10
16.51	Preparation of sub-base road pavement with commercial dry lime (slaked), fly ash stabilised soil with a mix of 3% lime, 12% fly ash and 85% local suitable soil by weight, so as to achieve minimum field C.B.R. of 20, including mixing, rolling with road roller curing etc. all complete.		
	16.51.1 Minimum thickness 15 cm	cum	729.65
16.52	Providing and fixing precast lime fly ash concrete blocks 1:2:3:6 (1 lime: 2 fly ash : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size), including finishing with 10mm thick cement mortar 1:3 (1 cement : 3 coarse sand) in foot paths, including preparation of sub grade with a hand rammer, laying 10 mm thick leveling course of fine sand (jamuna sand) and filling the joints with fine sand.	cum	7026.20
16.53	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length ( total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4 m or 3.00 m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer-in-charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5mm thick) wire of high tensile strength of 165 kg/ sq.mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately)	metre	255.00
16.54	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.		
	16.54.1 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	7247.70
	16.54.2 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	7140.45

Code No.	Description	Unit	Rate ₹
16.55	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.		
16.55.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	5708.05
16.55.2	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	5606.10
16.56	Providing and laying semi-dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.		
16.56.1	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	sqm	181.15
16.56.2	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	sqm	178.45
16.57	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.		
16.57.1	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	7863.85
16.57.2	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and		



Code No.	Description	Unit	Rate ₹
	waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	8345.45
16.57.3	40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	9073.00
16.57.4	40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	8389.10
16.57.5	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	7754.35
16.57.6	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	8236.00
16.57.7	40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	8963.55
16.57.8	40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	8279.65
16.59	Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required		

Code No.	Description	Unit	Rate ₹
	size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing, specification and direction of Engineer--in-charge.		
16.59.1	Mandatory/ Regulatory sign boards of 900 mm diametre with support length of 3750 mm	each	4786.35
16.59.2	Cautionary /warning sign boards of equilateral triangular shape having each side of 900 mm with support length of 3650 mm	each	3464.05
16.60	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).		
16.60.1	Overhead informatory road signage	sqm	4722.20
16.61	Providing Retro-reflective regulatory sign board of size 900 mm dia meter made out of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated lens type retro -reflective sheeting as approved by Engineer-in-charge . Letter, symbols, borders etc. will be as per IRC - 67 with required colour scheme on the boards and with the high intensity grade A. The aluminium sheet to be riveted to M.S. frame of angle iron of size 40x40x4 mm. The boards will be fixed to 1 No. 50x50 mm square post made of M.S. angle 50x50x4 mm, 4 m long welded to the frame with adequate anti-theft arrangement .Sheet work to be painted with two or more coats of synthetic enamel paint over an under coat (primer) and back side of aluminium sheet to be painted with two or more coats of epoxy paint including appropriate priming coat complete in all respects as per direction of Engineer-in-charge.	each	5266.45

Code No.	Description	Unit	Rate ₹
16.62	Providing and applying 2.5 mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	sqm	391.25
16.63	Providing, laying and making kerb channel 30 cm wide and 50 mm thick with cement concrete 1:3:6 (1 cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth etc. complete and as per direction of Engineer-in-charge.	sqm	382.05
16.64	Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.	sqm	141.35
16.65	Providing and fixing post delineators made of ABS round body fitted with 2 nos 100 mm dia high reflective reflectors and mounted on MS pipe of 65 mm dia duly powder coated anti-rust and anti theft steel to be installed as per direction of Engineer-in-charge.	each	554.50
16.66	Excavating holes upto 0.10 cum, including getting out the excavated soil, then returning the soil as deported in layers not exceeding 20 cm in depth, including consolidating and deposited layer by ramming watering etc., disposing of surplus excavated soil as directed with in a lead of 50 mm and lift upto 1.5 m.		
	16.66.1 All kind of soil	each	17.55
16.67	Providing and fixing at or near ground level factory made RCC pavement slab of M-30 grade of size 450x450x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos on each side, including setting in position in footpath to the required level and line over a bed of 20 mm average thick cement mortar 1:5 (1 cement : 5 coarse sand), having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar and making grooves etc. complete as per direction of Engineer-in-charge.	sqm	654.35
16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	sqm	615.70
16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per		

Code No.	Description	Unit	Rate ₹
	direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	cum	5012.65
16.70	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.		
16.70.1	Made of G.I. wire of dia 4 mm	sqm	561.70
16.70.2	Made of G.I. wire of dia. 4 mm, PVC coated to achieve outer dia not less than 5 mm in required colour and shade	sqm	594.65
16.71	Providing and fixing G.I. chain link fabric fencing of required width in mesh size 25x25 mm made of G.I. wire of dia 3 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.	sqm	594.15
16.72	Supplying and stacking of hard stone (for stone pitching) 22.5 cm thick at site.	cum	880.50
16.73	Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm including preparing the bedding surface etc. all complete. (Payment for Stone to be made separately).	sqm	279.35
16.74	75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with :		
16.74.1	Moorum	sqm	55.85
16.74.2	Stone aggregate 20 mm nominal size	sqm	131.65
16.74.3	Stone aggregate 40 mm nominal size	sqm	128.10
16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). <b>(Note:-</b> Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately).	cum	6912.15
16.76	Deduct for using of M-20 grade concrete instead of M-25 grade concrete in C.C. pavement.	cum	187.60
16.77	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).	sqm	3.60
16.78	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.		

Code No.	Description	Unit	Rate ₹
16.78.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	2089.70
16.78.2	With material conforming to Grade-II (size range 53 mm to 0.075 mm ) having CBR Value-25	cum	2080.15
16.78.3	With material conforming to Grade-III (size range 26.5 mm to 0.075 mm ) having CBR Value-20	cum	1931.45
16.79	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	cum.	2132.25
16.80	Construction of dry lean cement concrete sub base over a prepared sub-grade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in-charge.	cum	3331.95
16.81	Providing and erecting 2.00 metre high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge.  (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).	metre	1577.05
16.82	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	metre	16.05
16.83	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable		

Code No.	Description	Unit	Rate ₹
	material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	sqm	53.95
16.84	Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost).	sqm	209.20
16.85	Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)	metre	48.90
16.86	Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.		
	16.86.1 With granite stone of area less than 0.50 sqm.	sqm	3034.70
16.87	Providing and laying gang saw cut 30 mm thick, mirror polished pre moulded and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in footpath, flooring in road side plazas and similar locations, laid over 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.		
	16.87.1 With granite stone of area less than 0.50 sqm.	sqm	3339.60
16.88	Providing and laying matt finished vitrified tile of size 100x100x16mm having water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in out door floors such as footpath, court yard multi models etc., laid on 20mm thick base of cement mortar 1:4 (1cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as direction of Engineer-in-Charge.	sqm	842.95
16.89	Providing and laying matt finished vitrified tile of size 300x300x9.8mm having water absorption less than 0.5% and conforming to IS: 15622 of approved make in all colours and shades in outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	sqm	764.00

Code No.	Description	Unit	Rate ₹
16.90	Providing and laying tactile tile (for vision impaired persons as per standards) of size 300x300x9.8mm having water absorption less than 0.5% and conforming to IS: 15622, of approved make in all colours and shades in outdoor floors such as footpath, court yard, multi modals location etc., laid on 20mm thick base of cement mortar 1:4 (1 cement : 4 coarse sand) in all shapes & patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	sqm	1450.45
16.91	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of coarse sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer-in-Charge.		
16.91.1	60mm thick Cement concrete paver block of M-35 grade with approved colour, design & pattern.	sqm	756.15
16.91.2	80mm thick Cement concrete paver block of M-30 grade with approved colour, design & pattern.	sqm	638.95
16.92	Providing and fixing 10x10x7.50 cm Granite stone block hand cut and chisel dressed on top, for paving in floors, drains etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand) with joints 10mm wide filled with same mortar including ruled pointing etc. complete as per direction of engineer-in-charge.	sqm	1395.25
16.93	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways , neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick , 100 mm wide MS sheet duly painted over priming coat , reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.	sqm	1907.95
16.94	<b>Providing &amp; making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12 (D=100 mm with tolerance of ± 2%) zinc coated, Mesh wire diameter 3.0 mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2mm, supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per direction of Engineer-in-charge.</b>	cum	2501.10

Code No.	Description	Unit	Rate ₹
16.95	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12(D=100 mm with tolerance of $\pm 2\%$ ) Zinc+PVC coated, Mesh wire diameter 2.7/3.7mm, mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm(ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer-in- charge.	cum	2692.75
16.96	Providing & making Gabion structure with Mechanically Woven Double Twisted Hexagonal Shaped Wire mesh Gabion Boxes as per IS 16014:2012,MORTH Clause 2500, of required size, Mesh Type 10x12(D=100 mm with tolerance of $\pm 2\%$ ), Zinc+10% Al alloy+PVC coated, Mesh wire diameter 2.7/3.7mm (ID/OD), mechanically edged/selvedged with partitions at every 1m interval and shall have minimum 10 numbers of openings per meter of mesh perpendicular to twist, tying with lacing wire of diameter 2.2/3.2mm(ID/OD), supplied @3% by weight of Gabion boxes, filled with boulders with least dimension of 200 mm, as per drawing, all complete as per directions of Engineer- in-charge.	cum	3139.95



**SUB HEAD : 17.0**

**SANITARY INSTALLATIONS**

## BASIC RATES (17.0 SANITARY INSTALLATIONS)

Code No.	Description	Unit	Rate ₹
0100	Bandhani	day	407.00
0101	Bhisti	day	407.00
0103	Blacksmith 2nd class	day	448.00
0112	Carpenter 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0117	Assistant Fitter or 2nd class Fitter	day	448.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0128	Mate	day	407.00
0131	Painter	day	448.00
0295	Stone Aggregate (Single size) : 20 mm nominal size	cum	1300.00
0297	Stone Aggregate (Single size) : 10 mm nominal size	cum	1300.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0586	Chromium plated Brass screws 40 mm	100 Nos	310.00
0588	Chromium plated Brass screws 25 mm	100 Nos	190.00
0828	Anticorrosive bituminous paint (black)	litre	100.00
0830	Enamel paint	litre	155.00
0834	Synthetic enamel paint in all shades except black or chocolate shade	litre	150.00
0982	Coarse sand (zone III)	cum	1200.00
1007	Structural steel such as tees, angles channels and R.S. joists	quintal	3775.00
1309	C.I. bracket for wash basin and sinks	pair	65.00
1313	8 mm dia C.P. Brass/ S.S. Jet with flexible tube upto 1 metre long with S.S. tringular plate for Eureka type W.C.	each	200.00
1315	C.P.brass chain with 40 mm dia rubber plug	each	40.00
1330	Clamps and M.S. stays including bolts and nuts for 100 mm pipe	each	30.00
1331	M.S. Holder bat clamp of approved design for 100 mm S.C.I. pipe	each	20.00
1332	M.S. Holder bat clamp of approved design for 75 mm S.C.I. pipe	each	18.00
1334	Clamps and M.S. stays including bolts and nuts for 50 mm pipe	each	28.00
1335	Clamps and M.S. stays including bolts and nuts for 75 mm pipe	each	30.00
1350	Mosquito proof coupling of approved design	each	30.00
1363	Vitreous china foot rests 250x130x30 mm	pair	100.00
1369	S.C.I. gully or nahani grating 100 mm dia	each	18.00
1373	Rubber insertions for 80 mm dia pipe joints	each	15.00
1374	Rubber insertions for 100 mm dia pipe joints	each	18.00
1392	Mirror of superior make glass 60x45 cm	each	310.00
1396	Vitreous china pedestal for wash basin	each	700.00
1397	Pig lead	kilogram	138.00

Code No.	Description	Unit	Rate ₹
1532	Flush pipe with union spreaders and clamps all in C.P. brass for single stall	each	270.00
1533	Flush pipe with union spreaders and clamps all in C.P. brass for double stall	each	400.00
1534	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall	each	520.00
1535	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall	each	600.00
1540	Flush pipe and spreaders G.I. for single set of one squatting plate urinal	each	175.00
1541	Flush pipe and spreaders G.I. for range of two squatting plates urinal	each	250.00
1542	Flush pipe and spreaders G.I. for range of three squatting plates urinal	each	300.00
1543	Flush pipe and spreaders G.I. for range of four squatting plates urinal	each	390.00
1614	G.I. inlet connection	each	60.00
1616	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 75 mm dia	each	950.00
1617	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100 mm dia	each	1150.00
1620	S.C.I. plain bend 75 mm dia	each	170.00
1621	S.C.I. plain bend 100 mm dia	each	350.00
1624	S.C.I. bend with access door 75 mm dia	each	200.00
1625	S.C.I. bend with access door 100 mm dia	each	252.00
1627	S.C.I. plain single equal junctions 75x75x75 mm dia	each	265.00
1628	S.C.I. plain single equal junctions 100x100x100 mm dia	each	450.00
1630	S.C.I. single equal junctions 75x75x75 mm dia with access door	each	278.00
1631	S.C.I. single equal junctions 100x100x100 mm dia with access door	each	376.00
1633	S.C.I. plain double equal junctions 75x75x75x75 mm dia	each	346.00
1634	S.C.I. plain double equal junctions 100x100x100x100 mm dia	each	520.00
1636	S.C.I. double equal junctions 75x75x75x75 mm dia with access door	each	425.00
1637	S.C.I. double equal junctions 100x100x100x100 mm dia with access door	each	550.00
1639	Slotted cowl (terminal guard) 75 mm dia	each	151.00
1640	Slotted cowl (terminal guard) 100 mm dia	each	190.00
1653	Sand cast iron S&S plain single unequal junctions: 100x100x75 mm dia	each	370.00
1656	Sand cast iron S&S single unequal junctions: 100x100x75 mm dia with access door	each	400.00
1659	Sand cast iron S&S plain double unequal junctions: 100x100x75x75 mm dia	each	550.00
1662	Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia with access door	each	550.00
1666	Sand cast iron heel rest bend 75 mm dia	each	220.00
1667	Sand cast iron heel rest bend 100 mm dia	each	250.00

Code No.	Description	Unit	Rate ₹
1669	S.C.I. single equal invert branch of required degree 75x75x75 mm dia	each	320.00
1670	S.C.I. single equal invert branch of required degree 100x100x 100 mm dia	each	410.00
1672	S.C.I. double equal invert branch of required degree 75x75x75x 75 mm dia	each	410.00
1673	S.C.I. double equal invert branch of required degree 100x100x 100x100 mm dia	each	550.00
1674	S.C.I. single unequal invert branch of required degree 100x100x 75 mm dia	each	495.00
1677	S.C.I. double unequal invert branch of required degree 100x100x 75x75 mm dia	each	570.00
1682	S.C.I. door pieces 75 mm dia	each	275.00
1683	S.C.I. door pieces 100 mm dia	each	400.00
1685	S.C.I. collar 75 mm dia	each	92.00
1686	S.C.I. collar 100 mm dia	each	138.00
1863	Fire clay kitchen sink: 600x450x250 mm	each	1300.00
1871	White vitreous china laboratory sink 450x300x150 mm	each	820.00
1872	White vitreous china laboratory sink 600x450x200 mm	each	1525.00
1875	White plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	330.00
1876	Black plastic seat (solid) with lid C.P. brass hinges and rubber buffers	each	310.00
1881	Spun yarn	kilogram	50.00
1885	15 mm C.P. brass tap	each	210.00
1889	C.P. brass toilet paper holder of standard size	each	185.00
1891	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 50 mm dia	each	170.00
1893	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P. brass: 80 mm dia	each	225.00
1895	C.P. brass trap 40 mm dia	each	250.00
1896	100 mm S.C.I. trap with vent heel	each	315.00
1897	100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet	each	275.00
1898	100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet	each	218.00
1913	Vitreous china lipped front urinal	each	460.00
1915	Vitreous china squatting plate urinal	each	1053.00
1947	Vitreous china flat back wash basin 630x450 mm	each	725.00
1949	Vitreous china angle back wash basin 600x480 mm	each	725.00
1950	Vitreous china angle back wash basin 400x400 mm	each	425.00
1951	C.P. brass waste 32 mm	each	80.00
1952	C.P. brass waste 40 mm	each	95.00
1953	Vitreous china Indian type W.C. pan size 580 mm	each	450.00
1954	Vitreous china orrisa type W.C. pan size 580 mm	each	780.00
1955	Vitreous china pedestal type water closet	each	700.00

Code No.	Description	Unit	Rate ₹
1965	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	each	1300.00
1966	Floor mounted white vitreous china double trap syphonic WC with 10 litre cistern and all fittings & fixtures, seat cover etc	each	9500.00
1970	Vitreous china foot rests 250x125x25 mm	pair	100.00
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	103.77
2203	Carriage of Coarse sand	cum	103.77
2205	Carriage of Steel	tonne	92.24
2209	Carriage of Cement	tonne	92.24
3213	Vitreous china Surgeon type wash basin of size 660x460 mm	each	1000.00
3228	600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size	each	250.00
3229	Vitreous china flat back wash basin 550x400 mm	each	550.00
3617	C.P. Brass union 40mm dia	each	195.00
3620	C.C.I. (spun) socketed soil, waste and vent pipe 1.80 metres long: 100 mm dia	each	1196.00
3621	C.C.I. (spun) socketed soil, waste and vent pipe 1.80 metres long: 75 mm dia	each	1035.00
3624	S.C.I. S&S bends with access door 100 mm dia	each	290.00
3625	S.C.I. S&S bends with access door 75 mm dia	each	240.00
3628	S.C.I. S&S bend 100 mm dia	each	265.00
3629	S.C.I. S&S bend 75 mm dia	each	195.00
3634	S.C.I. S&S heel rest sanitary bend 100 mm dia	each	296.00
3635	S.C.I. S&S heel rest sanitary bend 75 mm dia	each	250.00
3640	S.C.I. S&S single equal junctions 100x100x100 mm	each	472.00
3641	S.C.I. S&S single equal junctions 75x75x75 mm	each	330.00
3644	S.C.I. S&S single equal junctions with access door 100x100x 100 mm	each	495.00
3645	S.C.I. S&S single equal junctions with access door 75x75x75 mm	each	373.00
3650	S.C.I. S&S double equal junctions 100x100x100x100 mm	each	620.00
3651	S.C.I. S&S double equal junctions 75x75x75x75 mm	each	462.00
3654	S.C.I. S&S double equal junctions with access door 100x100x 100x100 mm	each	615.00
3655	S.C.I. S&S double equal junctions with access door 75x75x75x 75 mm	each	480.00
3660	S.C.I. S&S single unequal junctions 100x100x75 mm	each	570.00
3664	S.C.I. S&S single unequal junctions with access door 100x100x 75 mm	each	640.00
3670	S.C.I. S&S double unequal junctions 100x100x75x75 mm	each	800.00
3674	S.C.I. S&S double unequal junctions with access door 100x100x 75x75 mm	each	850.00
3681	S.C.I. S&S single equal invert branch of required degree 100x 100x100 mm dia	each	425.00

Code No.	Description	Unit	Rate ₹
3682	S.C.I. S&S single equal invert branch of required degree 75x75x 75 mm dia	each	323.00
3685	S.C.I. S&S double equal invert branch of required degree 100x 100x100x100 mm dia	each	530.00
3686	S.C.I. S&S double equal invert branch of required degree 75x75x 75x75 mm dia	each	425.00
3690	S.C.I. S&S single unequal invert branch of required degree 100x 100x75 mm dia	each	545.00
3695	S.C.I. S&S double unequal invert branch of required degree 100x 100x75x75 mm dia	each	725.00
3699	S.C.I. S&S, 75 mm offset for 75 mm dia pipe	each	225.00
3707	S.C.I. S&S, 150 mm offset for 75 mm dia pipe	each	285.00
3708	S.C.I. S&S, 150 mm offset for 100 mm dia pipe	each	390.00
3712	S.C.I. S&S, 114 mm offset for 75 mm dia pipe	each	300.00
3713	S.C.I. S&S, 114 mm offset for 100 mm dia pipe	each	383.00
3716	S.C.I. S&S, 152 mm offset for 75 mm dia pipe	each	358.00
3717	S.C.I. S&S, 152 mm offset for 100 mm dia pipe	each	455.00
3728	S.C.I. S&S door pieces 100 mm dia	each	400.00
3729	S.C.I. S&S door pieces 75 mm dia	each	295.00
3733	S.C.I. S&S, Slotted Cowl (Terminal Guard) 100 mm	each	264.00
3734	S.C.I. S&S, Slotted Cowl (Terminal Guard) 75 mm	each	210.00
3738	S.C.I. S&S, collars 100 mm	each	279.00
3739	S.C.I. S&S, collars 75 mm	each	170.00
3746	S.C.I. S&S, 75 mm offset for 75 mm dia pipe	each	218.00
3747	S.C.I. S&S, 75 mm offset for 100 mm dia pipe	each	363.00
3749	Vitreous china toilet paper holder of standard size	each	100.00
4202	Red oxide Zinc chromate primer	litre	65.00
7004	Vitreous china flat back wash basin 450x300 mm	each	325.00
7005	Vitreous china 10 litres low level cistern without fittings	each	750.00
7006	Vitreous china 10 litres low level cistern with fittings	each	1300.00
7048	Rawl plug 50 mm (designation 10 nos)	each	10.00
7072	Wall mounted water closet of size 780x370x690 mm	each	4650.00
7073	Adjustable Vitreous China Cistern with fittings of flushing capacity 3litre/6 litre (adjustable to 4 litre/8 litre )	each	2000.00
7074	White Vitreous China Waterless Urinal of size 600 x 330x315 mm	each	10105.00
7075	Cistern with fittings for Waterless Urinal	each	2400.00
7076	Battery based infrared sensor operated White Vitreous Urinal of approx size 610 x 390 x 370 mm	each	4000.00
7095	Stainless steel kitchen sink - with drain board bowl depth 250 mm	each	2600.00
7096	Stainless steel kitchen sink - with drain board 510 x 1040 mm bowl depth 225 mm	each	2350.00

Code No.	Description	Unit	Rate ₹
7097	Stainless steel kitchen sink - with drain board 510 x 1040 mm bowl depth 200 mm	each	2300.00
7098	Stainless steel kitchen sink - with drain board 510x1040 mm bowl depth 178 mm	each	2250.00
7101	Stainless steel kitchen sink - without drain board 610x510 mm bowl depth 200 mm	each	1500.00
7102	Stainless steel kitchen sink - without drain board 610x460 mm bowl depth 200 mm	each	1250.00
7103	Stainless steel kitchen sink - without drain board 470x420 mm bowl depth 178 mm	each	1100.00
7104	Coloured Orissa pattern W.C. pan 580x440 mm	each	980.00
7105	Coloured Pedestal type W.C. pan 580x440 mm (European type)	each	900.00
7106	Coloured Vitreous china 10 lit. low level cistern	each	1100.00
7107	Coloured (other than black) solid P.V.C. seat in European W.C. pan	each	405.00
7112	Circular shape 450 mm dia Mirror with Plastic moulded frame	each	450.00
7113	Rectangular shape 453x357 mm Mirror with Plastic moulded frame	each	300.00
7114	Oval shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame	each	350.00
7115	Rectangular shape 1500x450 mm Mirror with Plastic moulded frame	each	700.00
7116	Hard board 6 mm thick	sqm	120.00
7117	Semi Rigid PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
7118	Semi Rigid PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	35.00
7119	Flexible (coil shaped) PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	28.00
7120	Flexible (coil shaped) PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
7121	Bottle Trap	each	650.00
7122	CP Brass Single lever telephonic wall mixer of approved make of aproved make	each	4000.00
7123	Coloured High density polyethylene / poly propylene 10 lit. (full flush) capacity controlled low level flushing cistern with fittings	each	540.00
7126	White Vitreous china 10 litre (full flush) capacity controlled low level flushing cistern with all fittings	each	800.00
7127	Coloured Vitreous china 10 litre (full flush) capacity controlled low level flushing cistern with all fittings	each	1200.00
7358	Flushing Cistern P.V.C. 10 litre capacity (low level) (White) (with fittings, accessories and flush pipe)	each	600.00
7359	P.V.C. automatic flushing cistern 5 litre capacity	each	490.00
7361	P.V.C. automatic flushing cistern 10 litre capacity	each	530.00
7363	15 mm C.P. brass tap with elbow operation lever	each	450.00
7364	White glazed fire clay draining board 600x450x25 mm	each	550.00

Code No.	Description	Unit	Rate ₹
7375	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal	each	465.00
7376	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals	each	800.00
7377	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals	each	1100.00
7378	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of four lipped urinals	each	1500.00
7379	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS:2556	each	907.00
7406	PTMT pillar cock	each	129.00
7491	PTMT - Waste Coupling 31/32 mm	each	36.00
7492	PTMT - Waste Coupling 38/40 mm	each	50.00
7493	PTMT - Bottle Trap 31/32 mm	each	218.00
7494	PTMT - Bottle Trap 38/40 mm	each	228.00
7503	PTMT Liquid Soap Container of 400 ml capacity	each	107.00
7504	PTMT - Towel Ring 215x200x37 mm	each	135.00
7505	PTMT - Towel Rail (450 mm)	each	141.00
7506	PTMT - Towel Rail (600 mm)	each	169.00
7507	PTMT Shelf 450x124x36 mm	each	210.00
7508	PTMT - Urinal Spreader 15 mm	each	80.00
7621	Hubless centrifugally cast (spun) iron pipes as per IS 15905 - 100 mm dia (3000 mm length pipe)	metre	729.00
7622	Hubless centrifugally cast (spun) iron pipes as per IS 15905 - 75 mm dia (3000 mm length pipe)	metre	597.00
7623	Hubless centrifugally cast (spun) iron plain bend as per IS 15905 - 100 mm dia	each	241.00
7624	Hubless centrifugally cast (spun) iron plain bend as per IS 15905 - 75 mm dia	each	164.00
7625	Hubless centrifugally cast (spun) iron double equal plain junction as per IS 15905 - 100x100x100x100 mm dia	each	532.00
7626	Hubless centrifugally cast (spun) iron double equal plain junction as per IS 15905 - 75x75x75x75 mm dia	each	286.00
7627	Hubless centrifugally cast (spun) iron single equal plain junction as per IS 15905 - 100x100x100 mm dia	each	410.00
7628	Hubless centrifugally cast (spun) iron single equal plain junction as per IS 15905 - 75x75x75 mm dia	each	225.00
7629	Hubless centrifugally cast (spun) iron double unequal plain junction as per IS 15905 - 100x100x75x75 mm dia	each	421.00
7630	Hubless centrifugally cast (spun) iron single unequal plain junction as per IS 15905 - 100x100x75 mm dia	each	392.00
7631	Hubless centrifugally cast (spun) iron double equal plain invert branch as per IS 15905 - 100x100x100x100 mm dia	each	653.00
7632	Hubless centrifugally cast (spun) iron single equal plain invert branch as per IS 15905 - 100x100x100 mm dia	each	410.00



Code No.	Description	Unit	Rate ₹
7633	Hubless centrifugally cast (spun) iron single equal plain invert branch as per IS 15905 - 75x75x75 mm dia	each	270.00
7634	Hubless centrifugally cast (spun) iron single unequal plain invert branch 45 degree as per IS 15905 - 100x100x75 mm dia	each	450.00
7735	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 1000 mm dia	metre	17032.00
7736	Extruded burnt flyash clay sewer bricks conforming to I.S 4885	1000 Nos	5400.00
7737	Fly ash bricks conforming to I.S. 12894	1000 Nos	5800.00
7738	Calcium Silicate Bricks machine moulded conforming to I.S. 4139	1000 Nos	5700.00
7639	Hubless centrifugally cast (spun) iron bend with access door - 100 mm dia as per IS 15905	each	380.00
7640	Hubless centrifugally cast (spun) iron bend with access door - 75 mm dia as per IS 15905	each	303.00
7641	Hubless centrifugally cast (spun) iron terminal guard (slotted cowl) - 100 mm dia as per IS 15905	each	283.00
7642	Hubless centrifugally cast (spun) iron trap with 100 mm inlet and 100 mm outlet as per IS 15905	each	560.00
7643	Hubless centrifugally cast (spun) iron trap with 100 mm inlet and 75 mm outlet as per IS 15905	each	404.00
7644	SS 304 grade shielded coupling with EPDM rubber gasket for 100 mm dia Hubless centrifugally cast (spun) iron	each	287.00
7645	SS 304 grade shielded coupling with EPDM rubber gasket for 75 mm dia Hubless centrifugally cast (spun) iron	each	262.00
7805	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724 mm X 578 mm	each	3600.00
7806	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm x 355 mm	each	1500.00
7807	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm x 345 mm	each	1500.00
7808	Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet	each	435.00
7809	Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet	each	468.00
7858	P.T.M.T. Urinal cock 15 mm dia	each	110.00
9001	CP brass centre Hole Basin mixer with cast spout	each	1200.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 17.0 SANITARY INSTALLATIONS

Code No.	Description	Unit	Rate ₹
17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan ) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:		
17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	each	3494.20
17.1.2	Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests	each	6769.60
17.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :		
17.2.1	W.C. pan with ISI marked white solid plastic seat and lid	each	3418.70
17.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	3395.45
17.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
17.3.1	W.C. pan with ISI marked white solid plastic seat and lid	each	4593.75
17.3.2	W.C. pan with ISI marked black solid plastic seat and lid	each	4570.50
17.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
17.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	each	3494.15
17.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern	each	5373.40
17.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern	each	7403.35
17.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern	each	10109.60

Code No.	Description	Unit	Rate ₹
17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required :		
17.5.1	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern	each	6187.40
17.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern	each	9317.60
17.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern	each	11694.90
17.5.4	Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern	each	13941.75
17.6	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. / PVC flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete, including painting of fittings and cutting and making good the walls and floors etc. wherever required :		
17.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern	each	4887.50
17.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern	each	7257.40
17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern	each	9650.15
17.6.4	Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern	each	11723.85
17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:		
17.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	each	2298.55
17.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap	each	2020.60
17.7.3	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps	each	2095.30

Code No.	Description	Unit	Rate ₹
17.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap	each	1817.35
17.7.5	White Vitreous China Angle back wash basin size 600 x 480 mm with single 15 mm C.P. brass pillar tap	each	2020.60
17.7.6	White Vitreous China Angle back wash basin size 400 x 400 mm with single 15 mm C.P. brass pillar tap	each	1672.15
17.7.7	White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap	each	1556.00
17.7.8	White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of 15 mm C.P. brass pillar taps with elbow including operated levers	each	3175.50
17.7.9	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked	each	2618.75
17.7.10	Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap	each	2920.75
17.7.11	Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap	each	2920.75
<b>17.7A</b>	<b>Providing and fixing wash basin with C.I. brackets, 15 mm dia CP Brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever required:-</b>		
	<b>(a) White Vitreous China Wash basin size 550x400 mm with a 15 mm CP Brass single hole basin mixer</b>	<b>each</b>	<b>2984.20</b>
<b>17.7B</b>	<b>Providing and fixing wash basin with C.I. brackets, 15 mm PTMT pillar cock, 32 mm PTMT waste coupling of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required. White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm PTMT pillar cock.</b>	<b>each</b>	<b>1706.20</b>
17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	each	975.25
17.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required:		
17.9.1	White glazed fire clay kitchen sink of size 600x450x 250 mm	each	2433.25
17.10	Providing and fixing Stainless Steel A ISi 304 (18/8) kitchen sink as per IS: 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :		

Code No.	Description	Unit	Rate ₹
17.10.1	Kitchen sink with drain board		
17.10.1.1	510x1040 mm bowl depth 250 mm	each	4120.80
17.10.1.2	510x1040 mm bowl depth 225 mm	each	3830.40
17.10.1.3	510x1040 mm bowl depth 200 mm	each	3772.35
17.10.1.4	510x1040 mm bowl depth 178 mm	each	3714.25
17.10.2	Kitchen sink without drain board		
17.10.2.1	610x510 mm bowl depth 200 mm	each	2476.60
17.10.2.2	610x460 mm bowl depth 200 mm	each	2186.25
17.10.2.3	470x420 mm bowl depth 178 mm	each	2012.00
17.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete, including painting of fittings and brackets, cutting and making good the wall wherever required :		
17.11.1	Size 450x300x150 mm	each	2392.60
17.11.2	Size 600x450x200 mm	each	3211.45
17.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :		
17.12.1	White glazed fire clay draining board of size 600x450x 25 mm	each	1033.30
17.13	Providing and fixing white vitreous china water closet squatting pan (Indian type) :		
17.13.1	Long pattern W.C. pan of size 580 mm	each	1073.30
17.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	1456.60
17.14	Extra for using coloured W.C. pan instead of white W.C. pan :		
17.14.1	Orissa pattern W.C. pan 580x440 mm	each	-232.30
17.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	1363.65
17.16	Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.	each	638.85
<b>17.16A</b>	<b>Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.</b>	<b>each</b>	<b>254.80</b>
17.17	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet :		
17.17.1	250x130x30 mm	pair	166.30
17.17.2	250x125x25 mm	pair	166.30
17.18	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.		
17.18.1	10 litre capacity - White	each	831.50
17.18.2	10 litre capacity - coloured	each	765.45

Code No.	Description	Unit	Rate ₹
17.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.		
17.19.1	10 litre (full flush) capacity-white	each	1452.90
17.19.2	10 litre (full flush) capacity-coloured	each	1917.50
17.20	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
17.20.1	White solid plastic seat with lid	each	410.20
17.20.2	Black solid plastic seat with lid	each	386.95
17.20.3	Coloured (other than black & white) solid plastic seat with lid	each	497.30
17.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	96.60
<b>17.22A</b>	<b>Providing and fixing CP Brass 32mm size Bottle Trap of approved quality &amp; make and as per the direction of Engineer-in-charge.</b>	<b>each</b>	<b>795.15</b>
<b>17.22B</b>	<b>Providing and fixing CP Brass Single lever telephonic wall mixer of quality &amp; make as approved by Engineer in charge. (a) 15 mm nominal dia</b>	<b>each</b>	<b>4715.75</b>
17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.	each	930.75
17.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	2264.75
17.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :		
17.25.1	Flat back wash basin of size 630x450 mm	each	969.30
17.25.2	Flat back wash basin of size 550x400 mm	each	766.05
17.25.3	Angle back wash basin of size 600x480 mm	each	969.30
17.25.4	Angle back wash basin of size 400x400 mm	each	620.85
17.25.5	Flat back wash basin of size 450x300 mm	each	504.70
17.25.6	Surgeon type wash basin of size 660x460 mm	each	1288.70
17.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings.		
17.26.1	White glazed fire clay sink of size 600x450x250 mm	each	1612.90
17.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings :		
17.27.1	Size 450x300x150 mm	each	1055.35
17.27.2	Size 600x450x200 mm	each	1874.20

Code No.	Description	Unit	Rate ₹
17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
17.28.1	Semi rigid pipe		
17.28.1.1	32 mm dia	each	75.60
17.28.1.2	40 mm dia	each	81.40
17.28.2	Flexible pipe		
17.28.2.1	32 mm dia	each	73.25
17.28.2.2	40 mm dia	each	75.60
17.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	29.25
17.30	Providing and fixing in position 25 mm diameter mosquito proof coupling of approved municipal design.	each	38.50
17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	each	817.95
17.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		
17.32.1	Circular shape 450 mm dia	each	905.00
17.32.2	Rectangular shape 453x357 mm	each	752.80
17.32.3	Oval shape 450x350 mm (outer dimensions)	each	809.50
17.32.4	Rectangular shape 1500x450 mm	each	1323.10
17.33	Providing and fixing 600x120x5 mm glass shelf with edges round off, supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	each	573.30
17.34	Providing and fixing toilet paper holder :		
17.34.1	C.P. brass	each	385.35
17.34.2	Vitreous china	each	295.45
17.35	Providing and fixing soil, waste and vent pipes :		
17.35.1	100 mm dia		
17.35.1.1	Sand cast iron S&S pipe as per IS: 1729	metre	862.80
17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	metre	921.65
17.35.1.3	<b>Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>metre</b>	<b>925.55</b>
17.35.2	75 mm diameter :		
17.35.2.1	Sand cast iron S&S pipe as per IS: 1729	metre	712.20
17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989	metre	794.55
17.35.2.3	<b>Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>metre</b>	<b>759.80</b>

Code No.	Description	Unit	Rate ₹
17.36	Providing and filling the joints with spun yarn, cement slurry and cement mortar 1:2 ( 1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :		
17.36.1	75 mm dia pipe	each	72.95
17.36.2	100 mm dia pipe	each	85.95
17.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :		
17.37.1	For 100 mm dia pipe	each	167.35
17.37.2	For 75 mm dia pipe	each	165.05
17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
17.38.1	100 mm dia		
17.38.1.1	Sand cast iron S&S as per IS - 1729	each	340.75
17.38.1.2	Sand cast iron S&S as per IS - 3989	each	384.90
<b>17.38.1.3</b>	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>489.45</b>
17.38.2	75 mm dia		
17.38.2.1	Sand cast iron S&S as per IS - 1729	each	271.40
17.38.2.2	Sand cast iron S&S as per IS- 3989	each	317.85
<b>17.38.2.3</b>	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>391.05</b>
17.39	Providing and fixing plain bend of required degree.		
17.39.1	100 mm dia		
17.39.1.1	Sand cast iron S&S as per IS - 1729	each	433.70
17.39.1.2	Sand cast iron S&S as per IS : 3989	each	334.95
<b>17.39.1.3</b>	<b>Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>each</b>	<b>307.10</b>
17.39.2	75 mm dia		
17.39.2.1	Sand cast iron S&S as per IS -1729	each	219.15
17.39.2.2	Sand cast iron S&S as per IS - 3989	each	248.20



Code No.	Description	Unit	Rate ₹
	<b>17.39.2.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>each</b>	<b>212.20</b>
17.40	Providing and fixing heel rest sanitary bend		
17.40.1	100 mm dia		
17.40.1.1	Sand cast iron S&S as per IS - 1729	each	317.55
17.40.1.2	Sand cast iron S&S as per IS - 3989	each	370.95
17.40.2	75 mm dia		
17.40.2.1	Sand cast iron S&S as per IS - 1729	each	277.20
17.40.2.2	Sand cast iron S&S as per IS - 3989	each	312.05
17.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
17.41.1	100x100x100x100 mm		
17.41.1.1	Sand cast iron S&S as per IS - 1729	each	686.65
17.41.1.2	Sand cast iron S&S as per IS - 3989	each	762.15
17.41.2	75x75x75x75 mm		
17.41.2.1	Sand cast iron S&S as per IS - 1729	each	532.75
17.41.2.2	Sand cast iron S&S as per IS - 3989	each	596.65
17.42	Providing and fixing double equal plain junction of required degree.		
17.42.1	100x100x100x100 mm		
17.42.1.1	Sand cast iron S&S as per IS - 1729	each	631.15
17.42.1.2	Sand cast iron S&S as per IS - 3989	each	747.30
	<b>17.42.1.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>each</b>	<b>645.10</b>
17.42.2	75x75x75x75 mm		
17.42.2.1	Sand cast iron S&S as per IS - 1729	each	423.55
17.42.2.2	Sand cast iron S&S as per IS - 3989	each	558.30
	<b>17.42.2.3 Hubless centrifugally cast (spun) iron pipes epoxy coated inside &amp; outside IS:15905</b>	<b>each</b>	<b>353.90</b>

Code No.	Description	Unit	Rate ₹
17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
17.43.1	100x100x100 mm		
17.43.1.1	Sand cast iron S&S as per IS - 1729	each	484.80
17.43.1.2	Sand cast iron S&S as per IS - 3989	each	623.00
17.43.2	75x75x75 mm		
17.43.2.1	Sand cast iron S&S as per IS - 1729	each	362.00
17.43.2.2	Sand cast iron S&S as per IS - 3989	each	472.35
17.44	Providing and fixing single equal plain junction of required degree :		
17.44.1	100x100x100 mm		
17.44.1.1	Sand cast iron S&S as per IS - 1729	each	549.85
17.44.1.2	Sand cast iron S&S as per IS - 3989	each	575.40
17.44.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>503.40</b>
17.44.2	75x75x75 mm		
17.44.2.1	Sand cast iron S&S as per IS - 1729	each	329.50
17.44.2.2	Sand cast iron S&S as per IS - 3989	each	405.00
17.44.2.3	<b>Hubless centrifugally cast (spun) Iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>283.05</b>
17.45	Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete:		
17.45.1	100x100x75x75 mm		
17.45.1.1	Sand cast iron S&S as per IS - 1729	each	686.90
17.45.1.2	Sand cast iron S&S as per IS - 3989	each	1035.35
17.46	Providing and fixing double unequal plain junction of required degree:		
17.46.1	100x100x75x75 mm		
17.46.1.1	Sand cast iron S&S as per IS - 1729	each	666.00
17.46.1.2	Sand cast iron S&S as per IS - 3989	each	956.35
17.46.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>516.15</b>

Code No.	Description	Unit	Rate ₹
17.47	Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
17.47.1	100x100x75 mm		
17.47.1.1	Sand cast iron S&S as per IS - 1729	each	512.65
17.47.1.2	Sand cast iron S&S as per IS - 3989	each	791.45
17.48	Providing and fixing single unequal plain junction of required degree :		
17.48.1	100x100x75 mm		
17.48.1.1	Sand cast iron S&S as per IS - 1729	each	456.90
17.48.1.2	Sand cast iron S&S as per IS - 3989	each	689.20
17.48.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>482.45</b>
17.49	Providing and fixing double equal plain invert branch of required degree:		
17.49.1	100x100x100x100 mm		
17.49.1.1	Sand cast iron S&S as per IS - 1729	each	666.00
17.49.1.2	Sand cast iron S&S as per IS 3989	each	642.75
17.49.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>785.60</b>
17.49.2	75x75x75x75 mm		
17.49.2.1	Sand cast iron S&S as per IS - 1729	each	497.90
17.49.2.2	Sand cast iron S&S as per IS - 3989	each	515.35
17.50	Providing and fixing single equal plain invert branch of required degree :		
17.50.1	100x100x100 mm		
17.50.1.1	Sand cast iron S&S as per iron 1729	each	503.40
17.50.1.2	Sand cast iron S&S as per IS - 3989	each	520.80
17.50.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>503.40</b>
17.50.2	75x75x75 mm		
17.50.2.1	Sand cast iron S&S as per IS - 1729	each	393.35

Code No.	Description	Unit	Rate ₹
	17.50.2.2 Sand cast iron S&S as per IS - 3989	each	396.85
	<b>17.50.2.3 Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>335.30</b>
17.51	Providing and fixing double unequal invert branch of required degree :		
	17.51.1 100x100x75x75 mm		
	17.51.1.1 Sand cast iron S&S as per IS - 1729	each	689.20
	17.51.1.2 Sand cast iron S&S as per IS - 3989	each	869.25
17.52	Providing and fixing single unequal plain invert branch of required degree :		
	17.52.1 100x100x75 mm		
	17.52.1.1 Sand cast iron S&S as per IS - 1729	each	602.10
	17.52.1.2 Sand cast iron S&S as per IS - 3989	each	660.20
	<b>17.52.1.3 Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>549.85</b>
17.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729		
	17.53.1 76 mm off sets		
	17.53.1.1 With 75 mm dia pipe	each	274.90
	17.53.1.2 With 100 mm dia pipe	each	443.30
	17.53.2 114 mm off sets		
	17.53.2.1 With 75 mm dia pipe	each	375.60
	17.53.2.2 With 100 mm dia pipe	each	472.00
	17.53.3 152 mm off sets		
	17.53.3.1 With 75 mm dia pipe	each	451.85
	17.53.3.2 With 100 mm dia pipe	each	564.55
<b>17.53A</b>	<b>Providing and fixing Hubless centrifugally cast iron offsets epoxy coated inside &amp; outside as per IS:15905</b>		
	<b>17.53A.1 65 mm offsets</b>		
	<b>17.53A.1.1 With 100 mm dia pipe</b>	<b>each</b>	<b>460.75</b>
	<b>17.53A.1.2 With 75 mm dia pipe</b>	<b>each</b>	<b>379.45</b>
17.54	Providing and fixing sand cast iron S&S off sets as per IS: 3989 :		
	17.54.1 75 mm off sets		
	17.54.1.1 With 75 mm dia pipe	each	283.05
	17.54.2 150 mm off sets		
	17.54.2.1 With 75 mm dia pipe	each	363.40
	17.54.2.2 With 100 mm dia pipe	each	485.40

Code No.	Description	Unit	Rate ₹
<b>17.54A</b>	<b>Providing and fixing Hubless centrifugally cast iron offsets epoxy coated inside &amp; outside as per IS:15905</b>		
<b>17.54A.1</b>	<b>130 mm offsets</b>		
<b>17.54A.1.1</b>	<b>With 100 mm dia</b>	<b>each</b>	<b>557.95</b>
<b>17.54A.1.2</b>	<b>With 75 mm dia</b>	<b>each</b>	<b>399.20</b>
17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :		
17.55.1	100 mm		
17.55.1.1	Sand cast iron S&S as per IS - 1729	each	512.65
17.55.1.2	Sand cast iron S&S as per IS - 3989	each	512.65
17.55.2	75 mm		
17.55.2.1	Sand cast iron S&S as per IS - 1729	each	358.50
17.55.2.2	Sand cast iron S&S as per IS - 3989	each	381.75
17.56	Providing and fixing terminal guard :		
17.56.1	100 mm		
17.56.1.1	Sand cast iron S&S as per IS - 1729	each	247.85
17.56.1.2	Sand cast iron S&S as per IS - 3989	each	333.80
<b>17.56.1.3</b>	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>355.85</b>
17.56.2	75 mm		
17.56.2.1	Sand cast iron S&S as per IS - 1729	each	197.10
17.56.2.2	Sand cast iron S&S as per IS - 3989	each	265.60
17.57	Providing and fixing collar :		
17.57.1	100 mm		
17.57.1.1	Sand cast iron S&S as per IS - 1729	each	187.45
17.57.1.2	Sand cast iron S&S as per IS - 3989	each	351.20
17.57.2	75 mm		
17.57.2.1	Sand cast iron S&S as per IS - 1729	each	128.55
17.57.2.2	Sand cast iron S&S as per IS - 3989	each	219.15

Code No.	Description	Unit	Rate ₹
17.57A	<b>Providing and fixing shielded coupling for Hubless centrifugally cast iron pipe</b>		
17.57A.1	<b>100 mm dia</b>		
17.57A.1.1	<b>SS 304 grade coupling with EPDM rubber gasket</b>	<b>each</b>	<b>360.50</b>
17.57A.2	<b>75 mm dia</b>		
17.57A.2.1	<b>SS 304 grade coupling with EPDM rubber gasket</b>	<b>each</b>	<b>326.00</b>
17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :		
17.58.1	100 mm	each	309.95
17.58.2	75 mm	each	263.60
17.58.3	50 mm	each	213.35
17.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :		
17.59.1	100 mm	each	62.00
17.59.2	75 mm	each	56.55
17.59.3	50 mm	each	51.60
17.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :		
17.60.1	100 mm inlet and 100 mm outlet		
17.60.1.1	Sand cast iron S&S as per IS: 3989	each	1034.45
17.60.1.2	Sand Cast Iron S&S as per IS: 1729	each	848.60
17.60.1.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>677.60</b>
17.60.2	100 mm inlet and 75 mm outlet		
17.60.2.1	Sand cast iron S&S as per IS - 3989	each	1072.80
17.60.2.2	Sand Cast Iron S&S as per IS- 1729	each	782.40
17.60.2.3	<b>Hubless centrifugally cast (spun) iron epoxy coated inside &amp; outside as per IS:15905</b>	<b>each</b>	<b>496.40</b>
17.61	Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 ( 1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :		
17.61.1	100 mm dia	metre	355.70
17.61.2	75 mm dia	metre	254.65
17.61.3	50 mm dia	metre	163.30

Code No.	Description	Unit	Rate ₹
17.62	Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality ) on the outside surface of the cistern, flush pipe, other fittings, etc. complete for new work.	each	471.75
17.63	Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete, including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.	each	328.40
17.64	Repainting C.I. cistern with synthetic enamel paint of approved colour, brand and manufacture on the outside surface of cistern, flush pipe, other fittings etc. complete.	each	140.30
17.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
17.65.1	100 mm diameter pipe	metre	40.65
17.65.2	75 mm diameter pipe	metre	31.00
17.66	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with one coat of synthetic enamel paint of any colour such as chocolate, grey or buff etc :		
17.66.1	100 mm diameter pipe	metre	20.20
17.66.2	75 mm diameter pipe	metre	15.10
17.67	Repainting bath tub of size 1700x730x430 mm with enamel paint.	each	412.55
17.68	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat & lid fixed with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40 mm flush bend, 20 mm over flow pipe, with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:		
17.68.1	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.	each	6290.85
17.69	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.		
17.69.1	Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms	each	82.55
17.69.2	Waste coupling 38 mm dia of 83 mm length and 77mm breadth, weighing not less than 60 gms	each	98.80
17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
17.70.1	Bottle trap 31mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms	each	293.95

Code No.	Description	Unit	Rate ₹
17.70.2	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms	each	305.55
17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	each	137.85
17.72	Providing and fixing PTMT towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms.	each	197.55
17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.		
17.73.1	450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms	each	390.20
17.73.2	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	each	422.70
17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour, weighing not less than 300 gms.	each	470.35
17.75	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes, weighing not less than 60 gms.	each	106.50
17.76	Providing and fixing PTMT urinal cock of approved quality and colour.		
17.76.1	15 mm nominal bore, 80 mm long, 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms	each	143.95
17.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5 mm flat of specified shape, projecting 75 mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners, including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30 mm x1.6 mm galvanised M.S. flats of specified shape and of total length 420 mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6 mm, one bolts on each side of the pipe.		
17.77.1	Total bracket length 580 mm of approved shape and design (for single 100 mm dia pipe)	each	179.40
17.77.2	Total bracket length 810 mm of approved shape and design (for two 100 mm dia pipes)	each	216.30
17.77.3	Total bracket length 1040 mm of approved shape and design (for three 100 mm dia pipes)	each	253.15



Code No.	Description	Unit	Rate ₹
17.78	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	each	9685.70
17.79	Providing & fixing white vitreous china water less urinal of size 600 x 330 x 315 mm having antibacterial /germs free ceramic surface, fixed with cartridge having debris catcher and hygiene seal.	each	15040.75
17.80	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	each	5162.20
17.81	<b>Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/ make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litres with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.</b>	each	12612.65

**SUB HEAD : 18.0**

**WATER SUPPLY**

**BASIC RATES (SH: 18.0 WATER SUPPLY)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0010	Hire charges of Derrick monkey rope	day	800.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0117	Assistant Fitter or 2nd class Fitter	day	448.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0593	C.P. Brass Extension Nipple (1/2"x2" size)	each	45.00
0761	Fuel wood	quintal	500.00
0771	Kerosene oil	litre	45.00
1301	Bleaching powder	quintal	1750.00
1304	Surface box for stop cock	each	125.00
1305	Surface box for sluice valve	each	210.00
1307	Surface box for water meter	each	250.00
1339	Brass bib-cock 15 mm dia	each	210.00
1340	Brass bib-cock 20 mm dia	each	225.00
1342	Brass stop-cock 15 mm dia	each	210.00
1343	Brass stop-cock 20 mm dia	each	225.00
1360	C.I. mouth, brass ferrule 15 mm dia	each	140.00
1361	C.I. mouth, brass ferrule 20 mm dia	each	160.00
1362	C.I. mouth, brass ferrule 25 mm dia	each	220.00
1373	Rubber insertions for 80 mm dia pipe joints	each	15.00
1374	Rubber insertions for 100 mm dia pipe joints	each	18.00
1375	Rubber insertions for 125 mm dia pipe joints	each	20.00
1376	Rubber insertions for 150 mm dia pipe joints	each	20.00
1377	Rubber insertions for 200 mm dia pipe joints	each	25.00
1378	Rubber insertions for 250 mm dia pipe joints	each	40.00
1379	Rubber insertions for 300 mm dia pipe joints	each	45.00
1380	Rubber insertions for 350 mm dia pipe joints	each	50.00
1381	Rubber insertions for 400 mm dia pipe joints	each	73.00
1382	Rubber insertions for 450 mm dia pipe joints	each	92.00
1383	Rubber insertions for 500 mm dia pipe joints	each	110.00
1384	Rubber insertions for 600 mm dia pipe joints	each	125.00
1397	Pig lead	kilogram	138.00
1464	S & S.C.I. standard specials upto 300 mm dia (heavy class)	quintal	3600.00
1466	S & S.C.I. standard specials over 300 mm dia (heavy class)	quintal	3700.00
1468	Flanged C.I. standard specials upto 300 mm dia (heavy class)	quintal	5500.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
1470	Flanged C.I. standard specials over 300 mm dia (heavy class)	quintal	5500.00
1472	Casing pipe 100 mm dia	metre	335.00
1545	G.I. pipes 15 mm dia	metre	77.00
1546	G.I. pipes 20 mm dia	metre	99.00
1547	G.I. pipes 25 mm dia	metre	110.00
1548	G.I. pipes 32 mm dia	metre	145.00
1549	G.I. pipes 40 mm dia	metre	185.00
1550	G.I. pipes 50 mm dia	metre	220.00
1551	G.I. pipes 65 mm dia	metre	295.00
1552	G.I. pipes 80 mm dia	metre	400.00
1555	G.I. back (jam) nuts 25 mm dia	each	8.00
1559	G.I. back (jam) nuts 65 mm dia	each	20.00
1608	G.I. tees (equal) 25 mm	each	40.00
1612	G.I. tees (equal) 65 mm	each	250.00
1641	G.I. Union 15 mm nominal bore	each	30.00
1642	G.I. Union 20 mm nominal bore	each	50.00
1643	G.I. Union 25 mm nominal bore	each	80.00
1644	G.I. Union 32 mm nominal bore	each	110.00
1645	G.I. Union 40 mm nominal bore	each	160.00
1646	G.I. Union 50 mm nominal bore	each	200.00
1647	G.I. Union 65 mm nominal bore	each	400.00
1648	G.I. Union 80 mm nominal bore	each	470.00
1649	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	5.30
1687	Unplasticised P.V.C. connection pipe with brass union 30 cm long 15 mm bore	each	30.00
1688	Unplasticised P.V.C. connection pipe with brass union 30 cm long 20 mm bore	each	35.00
1689	Unplasticised P.V.C. connection pipe with brass union 45 cm long 15 mm bore	each	35.00
1690	Unplasticised P.V.C. connection pipe with brass union 45 cm long 20 mm bore	each	48.00
1693	S.C.I. hand pump	each	670.00
1878	Shower rose C.P. brass for 15 to 20 mm inlet 100 mm dia	each	50.00
1879	Shower rose C.P. brass for 15 to 20 mm inlet 150 mm dia	each	60.00
1881	Spun yarn	kilogram	50.00
1882	Strainer brass 40 mm dia 1.5 metre long	each	600.00
1922	H.P. or L.P. ball valve with polythene floats: 15 mm dia	each	210.00
1923	H.P. or L.P. ball valve with polythene floats: 20 mm dia	each	235.00

Code No.	Description	Unit	Rate ₹
1924	H.P. or L.P. ball valve with polythene floats: 25 mm dia	each	230.00
1926	20 mm dia Gunmetal gate valve with wheel	each	325.00
1927	Brass full way valve with C.I. wheel (screwed end) 25 mm dia	each	350.00
1928	Brass full way valve with C.I. wheel (screwed end) 32 mm dia	each	410.00
1929	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	each	480.00
1930	Brass full way valve with C.I. wheel (screwed end) 50 mm dia	each	620.00
1931	Brass full way valve with C.I. wheel (screwed end) 65 mm dia	each	1080.00
1932	Brass full way valve with C.I. wheel (screwed end) 80 mm dia	each	1620.00
1933	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	each	330.00
1934	Gunmetal non-return valve-horizontal (screwed end) 32 mm dia	each	450.00
1935	Gunmetal non-return valve-horizontal (screwed end) 40 mm dia	each	560.00
1936	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia	each	820.00
1937	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia	each	1490.00
1938	Gunmetal non-return valve-horizontal (screwed end) 80 mm dia	each	2120.00
1940	C.I. sluice valve (with caps) class I: 100 mm dia	each	2410.00
1941	C.I. sluice valve (with caps) class I : 125 mm dia	each	2600.00
1942	C.I. sluice valve (with caps) class I: 150 mm dia	each	3600.00
1943	C.I. sluice valve (with caps) class I : 200 mm dia	each	7500.00
1944	C.I. sluice valve (with caps) class I : 250 mm dia	each	10980.00
1945	C.I. sluice valve (with caps) class I: 300 mm dia	each	15500.00
1956	Bolts and nuts 16 mm dia 60 mm long	each	11.00
1957	Bolts and nuts 16 mm dia 65 mm long	each	12.00
1958	Bolts and nuts 20 mm dia 65 mm long	each	15.00
1959	Bolts and nuts 20 mm dia 70 mm long	each	17.00
1960	Bolts and nuts 20 mm dia 75 mm long	each	16.00
1961	Bolts and nuts 20 mm dia 80 mm long	each	18.00
1962	Bolts and nuts 24 mm dia 85 mm long	each	28.00
1963	Bolts and nuts 24 mm dia 90 mm long	each	32.00
1964	Bolts and nuts 27 mm dia 100 mm long	each	38.00
2271	Carriage of G.I. pipes below 100 mm dia	tonne	92.24
2272	Carriage of Stainless Steel pipes below 100 mm dia	tonne	92.24
2309	Carriage of Cast Iron fittings	tonne	92.24
2319	Carriage of Spun iron S & S pipes 100 mm dia	100 metre	226.82
2320	Carriage of Spun iron S & S pipes 125 mm dia	100 metre	302.97
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	378.03
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	614.93
2323	Carriage of Spun iron S & S pipes 250 mm dia	100 metre	873.84
2324	Carriage of Spun iron S & S pipes 300 mm dia	100 metre	1080.08

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
2325	Carriage of Spun iron S & S pipes 350 mm dia	100 metre	1512.11
2326	Carriage of Spun iron S & S pipes 400 mm dia	100 metre	2061.97
2327	Carriage of Spun iron S & S pipes 450 mm dia	100 metre	2520.19
2328	Carriage of Spun iron S & S pipes 500 mm dia	100 metre	2520.19
2329	Carriage of Spun iron S & S pipes 600mm dia	100 metre	3780.28
2330	Carriage of C.I. pipes 500 mm dia	100 metre	2520.19
2331	Carriage of R.C.C. pipes 900 mm dia	100 metre	5670.42
2332	Carriage of R.C.C. pipes 1000 mm dia	100 metre	7560.57
2333	Carriage of R.C.C. pipes 1100 mm dia	100 metre	7560.57
2334	Carriage of R.C.C. pipes 1200 mm dia	100 metre	7560.57
2335	Carriage of Jamuna sand	cum	103.77
2341	Carriage of Pig lead	tonne	92.24
2343	Carriage of Ductile Iron pipes (k7) 100 mm dia	100 metre	226.82
2344	Carriage of Cast iron pipes 150 mm dia	100 metre	378.03
2345	Carriage of Cast iron pipes 200 mm dia	100 metre	614.93
2346	Carriage of Cast iron pipes 250 mm dia	100 metre	873.84
2347	Carriage of Cast iron pipes 300 mm dia	100 metre	1080.08
2348	Carriage of Cast iron pipes 350 mm dia	100 metre	1512.11
2349	Carriage of Cast iron pipes 400 mm dia	100 metre	2061.97
2350	Carriage of Cast iron pipes 450 mm dia	100 metre	2520.19
2351	Carriage of Cast iron pipes 500 mm dia	100 metre	2520.19
2352	Carriage of Cast iron pipes 600 mm dia	100 metre	3780.28
2353	Carriage of Cast iron pipes 700 mm dia	100 metre	3780.28
2355	Carriage of Cast iron pipes 800 mm dia	100 metre	3780.28
2356	Carriage of Cast iron pipes 900 mm dia	100 metre	5670.42
2357	Carriage of Cast iron pipes 1000 mm dia	100 metre	7560.57
3080	Gunmetal non-return valve - vertical (screwed end) 25 mm dia	each	350.00
3084	Gunmetal non-return valve - vertical (screwed end) 32 mm dia	each	500.00
3088	Gunmetal non-return valve - vertical (screwed end) 40 mm dia	each	700.00
3092	Gunmetal non-return valve - vertical (screwed end) 50 mm dia	each	900.00
3096	Gunmetal non-return valve - vertical (screwed end) 65 mm dia	each	1500.00
3300	Gunmetal non-return valve - vertical (screwed end) 80 mm dia	each	2500.00
3311	C.I. sluice valve (with caps) class II : 100 mm dia	each	2700.00
3314	C.I. sluice valve (with caps) class II : 125 mm dia	each	3200.00
3317	C.I. sluice valve (with caps) class II : 150 mm dia	each	4000.00
3320	C.I. sluice valve (with caps) class II : 200 mm dia	each	8900.00
3321	C.I. sluice valve (with caps) class II : 250 mm dia	each	14500.00

Code No.	Description	Unit	Rate ₹
3326	C.I. sluice valve (with caps) class II : 300 mm dia	each	18200.00
3327	15 mm Battery Based Sensor Pillar Cock	each	5800.00
6501	Sand zone V (Jamuna)	cum	600.00
7257	C.P. Brass bibcock 15 mm	each	300.00
7258	C.P. Brass long nose bibcock 15 mm	each	450.00
7259	C.P. Brass long body bibcock 15 mm	each	400.00
7260	C.P. Brass stop cock (concealed) 15 mm	each	450.00
7261	C.P. Brass angle valve 15 mm	each	390.00
7400	15 mm PTMT bib cock	each	75.00
7401	15 mm PTMT bib cock with flange (fancy)	each	110.00
7402	15 mm PTMT bib cock long body with flange	each	122.00
7403	15 mm dia PTMT stop cock (male thread)	each	75.00
7405	20 mm dia PTMT stop cock	each	102.00
7406	PTMT pillar cock	each	129.00
7407	PTMT push cock 15 mm dia	each	65.00
7408	PTMT push cock 12 mm dia 20 mm BSP	each	60.00
7409	PTMT grating 100 mm dia	each	21.00
7410	PTMT Pillar cock (fancy) 15 mm foam flow	each	144.00
7411	125 mm grating with waste hole	each	32.00
7412	Rectangular type with openable circular lid 150 mm size 18 mm high with 100 mm dia (110 gm)	each	122.00
7415	Double acting air valve 50 mm	each	3900.00
7416	Double acting air valve 80 mm	each	4750.00
7417	Double acting air valve 100 mm	each	6200.00
7418	Water meter (including testing charges) 80 mm	each	2130.00
7419	Water meter (including testing charges) 100 mm	each	3300.00
7420	Water meter (including testing charges) 150 mm	each	5000.00
7421	Water meter (including testing charges) 200 mm	each	5400.00
7422	Dirt box strainer 80 mm	each	2810.00
7423	Dirt box strainer 100 mm	each	4580.00
7424	Dirt box strainer 150 mm	each	5810.00
7425	Dirt box strainer 200 mm	each	8250.00
7495	PTMT Ball Cock 15mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	105.00
7496	PTMT Ball Cock 20mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	140.00
7497	PTMT Ball Cock 25mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	300.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7498	PTMT Ball Cock 40mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	501.00
7499	PTMT Ball Cock 50mm complete with Epoxy Coated Aluminium Rod & H.D. Ball	each	913.00
7500	PTMT Angle Stop cock with Flange 15 mm	each	102.00
7501	PTMT Swiveling shower 15 mm	each	75.00
7509	PTMT Soap Dish/Holder 138x102x75 mm	each	85.00
7651	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 100 mm dia	metre	800.00
7652	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 150 mm dia	metre	1200.00
7653	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 200 mm dia	metre	1650.00
7654	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 250 mm dia	metre	2300.00
7655	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 300 mm dia	metre	2860.00
7656	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 350 mm dia	metre	3510.00
7657	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 400 mm dia	metre	4500.00
7658	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 450 mm dia	metre	5200.00
7659	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 500 mm dia	metre	6580.00
7660	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 600 mm dia	metre	7930.00
7661	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 700 mm dia	metre	11000.00
7662	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 750 mm dia	metre	11900.00
7663	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 800 mm dia	metre	12000.00
7664	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 900 mm dia	metre	14500.00
7665	Ductile Iron class K - 9 pipe Conforming to I.S. 8329 - 1000 mm dia	metre	16300.00
7666	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 100 mm dia	each	30.00
7668	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 150 mm dia	each	38.00
7669	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 200 mm dia	each	66.00
7670	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 250 mm dia	each	78.00
7671	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 300 mm dia	each	115.00
7672	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 350 mm dia	each	132.00
7673	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 400 mm dia	each	240.00
7674	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 450 mm dia	each	280.00
7675	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 500 mm dia	each	305.00
7676	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 600 mm dia	each	380.00
7677	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 700 mm dia	each	575.00
7678	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 750 mm dia	each	690.00
7679	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 800 mm dia	each	760.00
7680	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 900 mm dia	each	1000.00
7681	Rubber Gaskets Conforming to I.S 5382 of S.B.R quality 1000 mm dia	each	1200.00



Code No.	Description	Unit	Rate ₹
7682	Ductile Iron K - 12 specials suitable for push on jointing up to 600 mm dia	quintal	13000.00
7683	Ductile Iron K - 12 specials suitable for push on jointing over 600 mm dia	quintal	18000.00
7684	Ductile Iron specials suitable for mechanical jointing as per I.S. 9523 - up to 600 mm dia	quintal	13700.00
7685	Ductile Iron Specials suitable for mechanical jointing as per I.S. 9523 over 600 mm dia	quintal	19650.00
7686	Ductile Iron Pipe Class K-9 flanges and welding 100 mm dia	metre	1155.00
7687	Ductile Iron Pipe Class K-9 flanges and welding 150 mm dia	metre	1733.00
7688	Ductile Iron Pipe Class K-9 flanges and welding 200 mm dia	metre	2179.00
7689	Ductile Iron Pipe Class K-9 flanges and welding 250 mm dia	metre	3098.00
7690	Ductile Iron Pipe Class K-9 flanges and welding 300 mm dia	metre	3980.00
7691	Ductile Iron Pipe Class K-9 flanges and welding 350 mm dia	metre	5019.00
7692	Ductile Iron Pipe Class K-9 flanges and welding 400 mm dia	metre	6458.00
7693	Ductile Iron Pipe Class K-9 flanges and welding 450 mm dia	metre	6776.00
7694	Ductile Iron Pipe Class K-9 flanges and welding 500 mm dia	metre	9639.00
7695	Ductile Iron Pipe Class K-9 flanges and welding 600 mm dia	metre	12758.00
7696	Ductile Iron Pipe Class K-9 flanges and welding 700 mm dia	metre	15089.00
7697	S&S Centrifugally (Spun) C.I. Pipe class LA 100 mm dia	metre	900.00
7698	S&S Centrifugally (Spun) C.I. Pipe class LA 125 mm dia	metre	1120.00
7699	S&S Centrifugally (Spun) C.I. Pipe class LA 150 mm dia	metre	1350.00
7700	S&S Centrifugally (Spun) C.I. Pipe class LA 200 mm dia	metre	2300.00
7701	S&S Centrifugally (Spun) C.I. Pipe class LA 250 mm dia	metre	3000.00
7702	S&S Centrifugally (Spun) C.I. Pipe class LA 300 mm dia	metre	4050.00
7703	S&S Centrifugally (Spun) C.I. Pipe class LA 350 mm dia	metre	4850.00
7704	S&S Centrifugally (Spun) C.I. Pipe class LA 400 mm dia	metre	6400.00
7705	S&S Centrifugally (Spun) C.I. Pipe class LA 450 mm dia	metre	7750.00
7706	S&S Centrifugally (Spun) C.I. Pipe class LA 500 mm dia	metre	9000.00
7707	S&S Centrifugally (Spun) C.I. Pipe class LA 600 mm dia	metre	12595.00
7708	S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing up to 300 mm dia	quintal	5450.00
7709	S&S Centrifugally (Spun) C.I. Pipe Specials as per IS 1538 suitable for lead jointing over 300 mm dia	quintal	6510.00
7710	S&S Centrifugally (Spun) C.I. Pipe specials suitable for mechanical joint as per I.S. 13382 up to 300 mm dia	quintal	9000.00
7711	S&S Centrifugally (Spun) C.I. Pipe Specials suitable for mechanical joint as per I.S. 13382 over 300 mm dia	quintal	9500.00
7712	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 100 mm dia	metre	1375.00

Code No.	Description	Unit	Rate ₹
7713	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 150 mm dia	metre	2150.00
7714	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 200 mm dia	metre	3400.00
7715	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 250 mm dia	metre	4100.00
7716	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 300 mm dia	metre	5240.00
7717	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 350 mm dia	metre	6600.00
7718	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 400 mm dia	metre	8550.00
7719	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 450 mm dia	metre	10900.00
7720	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 500 mm dia	metre	13560.00
7721	Screwed double flanged centrifugally cast (spun) C.I. Pipe of Class B conforming to I.S. 1536, - 600 mm dia	metre	18800.00
7722	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 100 mm dia	metre	775.00
7723	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 150 mm dia	metre	1120.00
7724	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 200 mm dia	metre	1550.00
7725	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 250 mm dia	metre	2100.00
7726	Ductile Iron Class K- 7 pipe conforming to i.S. 8329 - 300 mm dia	metre	2771.00
7727	Ductile Iron Class K- 7 pipe conforming to i.S. 8329 - 350 mm dia	metre	3354.00
7728	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 400 mm dia	metre	4015.00
7729	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 450 mm dia	metre	4852.00
7730	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 500 mm dia	metre	5735.00
7731	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 600 mm dia	metre	7402.00
7732	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 700 mm dia	metre	9613.00
7733	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 800 mm dia	metre	12100.00
7734	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 900 mm dia	metre	15603.00
7735	Ductile Iron Class K- 7 pipe conforming to I.S. 8329 - 1000 mm dia	metre	17032.00
7859	P.T.M.T. Bib cock with nozzle 15 mm	each	84.00
7861	P.T.M.T. Stop cock (concealed) 15 mm	each	125.00
7862	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	32.00
7863	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	34.00
7864	P.T.M.T. extension nipple 15 mm	each	19.00
7865	P.T.M.T. extension nipple 20 mm	each	28.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7866	P.T.M.T. extension nipple 25 mm	each	40.00
8300	1216 mm PE-AL-PE Composite pressure pipe	metre	62.00
8301	1620 mm PE-AL-PE Composite pressure pipe	metre	78.00
8302	2025 mm PE-AL-PE Composite pressure pipe	metre	110.00
8303	2532 mm PE-AL-PE Composite pressure pipe	metre	157.00
8304	3240 mm PE-AL-PE Composite pressure pipe	metre	235.00
8305	4050 mm PE-AL-PE Composite pressure pipe	metre	330.00
8636	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia	metre	35.00
8637	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia	metre	54.00
8638	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia	metre	78.00
8639	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia	metre	117.00
8640	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia	metre	160.00
8641	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia	metre	268.00
8642	Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5 mm inner dia	metre	651.00
8643	Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia	metre	730.00
8644	Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia	metre	985.00
8645	Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia	metre	1462.00
8701	SS pipe 304 grades with press fit technology as per JIS 3448 standard 48.60 mm outer dia	metre	584.00
8702	Coupling/Socket fittings for 15.88 mm outer dia SS pipe	each	42.00
8779	SS pipe 304 grades with press fit technology as per JIS 3448 standard 15.88 mm outer dia	metre	142.00
8780	SS pipe 304 grades with press fit technology as per JIS 3448 standard 22.22 mm outer dia	metre	254.00
8781	SS pipe 304 grades with press fit technology as per JIS 3448 standard 28.58 mm outer dia	metre	324.00
8782	SS pipe 304 grades with press fit technology as per JIS 3448 standard 34.00 mm outer dia	metre	462.00
8783	SS pipe 304 grades with press fit technology as per JIS 3448 standard 42.70 mm outer dia	metre	479.00
8786	Coupling/Socket fittings for 22.22 mm outer dia SS pipe	each	63.00
8787	Coupling/Socket fittings for 28.58 mm outer dia SS pipe	each	89.00
8788	Coupling/Socket fittings for 34.00 mm outer dia SS pipe	each	131.00
8789	Coupling/Socket fittings for 42.70 mm outer dia SS pipe	each	158.00
8790	Coupling/Socket fittings for 48.60 mm outer dia SS pipe	each	180.00
8791	Reducer for 22.22 mm X 15.88 mm outer Dia SS pipe	each	103.00
8792	Reducer for 28.58 mm X 15.88 mm outer Dia SS pipe	each	141.00
8793	Reducer for 28.58 mm X 22.22 mm outer Dia SS pipe	each	145.00
8794	Reducer for 34.00 mm X 15.88 mm outer Dia SS pipe	each	184.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8795	Reducer for 34.00 mm X 22.22 mm outer Dia SS pipe	each	187.00
8796	Reducer for 34.00 mm X 28.58 mm outer Dia SS pipe	each	190.00
8797	Reducer for 42.70 mm X 15.88 mm outer Dia SS pipe	each	359.00
8798	Reducer for 42.70 mm X 22.22 mm outer Dia SS pipe	each	362.00
8799	Reducer for 42.70 mm X 28.58 mm outer Dia SS pipe	each	362.00
8800	Reducer for 42.70 mm X 34.00 mm outer Dia SS pipe	each	387.00
8801	Reducer for 48.60 mm X 15.88 mm outer Dia SS pipe	each	410.00
8802	Reducer for 48.60 mm X 22.22 mm outer Dia SS pipe	each	410.00
8803	Reducer for 48.60 mm X 28.58 mm outer Dia SS pipe	each	410.00
8804	Reducer for 48.60 mm X 34.00 mm outer Dia SS pipe	each	410.00
8805	Reducer for 48.60 mm X 42.70 mm outer Dia SS pipe	each	410.00
8806	Slip Coupling / Socket 15.88 mm outer dia SS pipe	each	47.00
8807	Slip Coupling / Socket 22.22 mm outer dia SS pipe	each	63.00
8808	Slip Coupling / Socket 28.58 mm outer dia SS pipe	each	89.00
8809	Slip Coupling / Socket 34.00 mm outer dia SS pipe	each	131.00
8810	Slip Coupling / Socket 42.70 mm outer dia SS pipe	each	158.00
8811	Slip Coupling / Socket 48.60 mm outer dia SS pipe	each	170.00
8812	Elbow 90° for 15.88 mm outer dia SS pipe	each	58.00
8813	Elbow 90° for 22.22 mm outer dia SS pipe	each	63.00
8814	Elbow 90° for 28.58 mm outer dia SS pipe	each	96.00
8815	Elbow 90° for 34.00 mm outer dia SS pipe	each	109.00
8816	Elbow 90° for 42.70 mm outer dia SS pipe	each	116.00
8817	Elbow 90° for 48.60 mm outer dia SS pipe	each	150.00
8818	Reducing Elbow 90° for 22.22 mm X 15.88 mm outer dia SS pipe	each	148.00
8819	Reducing Elbow 90° for 28.58 mm X 15.88 mm outer dia SS pipe	each	191.00
8820	Reducing Elbow 90° for 28.58 mm X 22.22 mm outer dia SS pipe	each	221.00
8821	Reducing Elbow 90° for 34.00 mm X 22.22 mm outer dia SS pipe	each	287.00
8822	Reducing Elbow 90° for 34.00 mm X 28.58 mm outer dia SS pipe	each	396.00
8823	Reducing Elbow 90° for 42.70 mm X 34.00 mm outer dia SS pipe	each	179.00
8824	Equal Tee for 15.88 mm outer dia SS pipe	each	159.00
8825	Equal Tee for 22.22 mm outer dia SS pipe	each	231.00
8826	Equal Tee for 28.58 mm outer dia SS pipe	each	273.00
8827	Equal Tee for 34.00 mm outer dia SS pipe	each	437.00
8828	Equal Tee for 42.70 mm outer dia SS pipe	each	683.00
8829	Equal Tee for 48.60 mm outer dia SS pipe	each	887.00
8830	Reducing Tee for 22.22 mm X 15.88 mm outer dia SS	each	179.00
8831	Reducing Tee for 28.58 mm X 15.88 mm outer dia SS pipe	each	273.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8832	Reducing Tee for 28.58 mm X 22.22 mm outer dia SS pipe	each	273.00
8833	Reducing Tee for 34.00 mm X 15.88 mm outer dia SS pipe	each	437.00
8834	Reducing Tee for 34.00 mm X 22.22 mm outer dia SS pipe	each	437.00
8835	Reducing Tee for 34.00 mm X 28.58 mm outer dia SS pipe	each	437.00
8836	Reducing Tee for 42.70 mm X 15.88 mm outer dia SS pipe	each	683.00
8837	Reducing Tee for 42.70 mm X 22.22 mm outer dia SS pipe	each	683.00
8838	Reducing Tee for 42.70 mm X 28.58 mm outer dia SS pipe	each	683.00
8839	Reducing Tee for 42.70 mm X 34.00 mm outer dia SS pipe	each	683.00
8840	Reducing Tee for 48.60 mm X 15.88 mm outer dia SS pipe	each	887.00
8841	Reducing Tee for 48.60 mm X 22.22 mm outer dia SS pipe	each	887.00
8842	Reducing Tee for 48.60 mm X 28.58 mm outer dia SS pipe	each	887.00
8843	Reducing Tee for 48.60mm X 34.00 mm outer dia SS pipe	each	887.00
8844	Reducing Tee for 48.60mm X 42.70mm outer dia SS pipe	each	887.00
8845	Stainless steel Male thread Tee for 15.88 mm outer dia X 15 mm nominal dia threaded	each	179.00
8846	Stainless steel Male thread Tee for 22.22 mm outer dia X 15 mm nominal dia threaded	each	200.00
8847	Stainless steel Male thread Tee for 22.22 mm outer dia X 20 mm nominal dia threaded	each	205.00
8848	Stainless steel Male thread Tee for 28.58 mm outer dia X 15 mm nominal dia threaded	each	273.00
8849	Stainless steel Male thread Tee for 28.58 mm outer dia X 20 mm nominal dia threaded	each	273.00
8850	Stainless steel Male thread Tee for 28.58 mm outer dia X 25 mm nominal dia threaded	each	273.00
8851	Stainless steel Male thread Tee for 34.00 mm outer dia X 15 mm nominal dia threaded	each	437.00
8852	Stainless steel Male thread Tee for 34.00 mm outer dia X 20 mm nominal dia threaded	each	437.00
8853	Stainless steel Male thread Tee for 34.00 mm outer dia X 25 mm nominal dia threaded	each	437.00
8854	Stainless steel Male thread Tee for 34.00 mm outer dia X 32 mm nominal dia threaded	each	437.00
8855	Stainless steel Male thread Tee for 42.70 mm outer dia X 15 mm nominal dia threaded	each	683.00
8856	Stainless steel Male thread Tee for 42.70 mm outer dia X 20 mm nominal dia threaded	each	683.00
8857	Stainless steel Male thread Tee for 42.70 mm outer dia X 25 mm nominal dia threaded	each	683.00
8858	Stainless steel Male thread Tee for 42.70 mm outer dia X 32 mm nominal dia threaded	each	683.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8859	Stainless steel Male thread Tee for 42.70 mm outer dia X 40 mm nominal dia threaded	each	683.00
8860	Stainless steel Male thread Tee for 48.60 mm outer dia X 15 mm nominal dia threaded	each	887.00
8861	Stainless steel Male thread Tee for 48.60 mm outer dia X 20 mm nominal dia threaded	each	887.00
8862	Stainless steel Male thread Tee for 48.60 mm outer dia X 25 mm nominal dia threaded	each	887.00
8863	Stainless steel Male thread Tee for 48.60 mm outer dia X 32 mm nominal dia threaded	each	887.00
8864	Stainless steel Male thread Tee for 48.60 mm outer dia X 40 mm nominal dia threaded	each	887.00
8865	Stainless steel Male thread Tee for 48.60 mm outer dia X 50 mm nominal dia threaded	each	887.00
8866	Stainless steel Female thread Tee for 15.88 mm outer dia X 15 mm nominal dia threaded	each	179.00
8867	Stainless steel Female thread Tee for 22.22 mm outer dia X 15 mm nominal dia threaded	each	200.00
8868	Stainless steel Female thread Tee for 22.22 mm outer dia X 20 mm nominal dia threaded	each	200.00
8869	Stainless steel Female thread Tee for 28.58 mm outer dia X 15 mm nominal dia threaded	each	273.00
8870	Stainless steel Female thread Tee for 28.58 mm outer dia X 20 mm nominal dia threaded	each	273.00
8871	Stainless steel Female thread Tee for 28.58 mm outer dia X 25 mm nominal dia threaded	each	273.00
8872	Stainless steel Female thread Tee for 34.00 mm outer dia X 15 mm nominal dia threaded	each	437.00
8873	Stainless steel Female thread Tee for 34.00 mm outer dia X 20 mm nominal dia threaded	each	437.00
8874	Stainless steel Female thread Tee for 34.00 mm outer dia X 25 mm nominal dia threaded	each	437.00
8875	Stainless steel Female thread Tee for 34.00 mm outer dia X 32 mm nominal dia threaded	each	437.00
8876	Stainless steel Female thread Tee for 42.70 mm outer dia X 15 mm nominal dia threaded	each	683.00
8877	Stainless steel Female thread Tee for 42.70 mm outer dia X 20 mm nominal dia threaded	each	683.00
8878	Stainless steel Female thread Tee for 42.70 mm outer dia X 25 mm nominal dia threaded	each	683.00
8879	Stainless steel Female thread Tee for 42.70 mm outer dia X 32 mm nominal dia threaded	each	683.00
8880	Stainless steel Female thread Tee for 42.70 mm outer dia X 40 mm nominal dia threaded	each	683.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8881	Stainless steel Female thread Tee for 48.60 mm outer dia X 15 mm nominal dia threaded	each	887.00
8882	Stainless steel Female thread Tee for 48.60 mm outer dia X 20 mm nominal dia threaded	each	887.00
8883	Stainless steel Female thread Tee for 48.60 mm outer dia X 25 mm nominal dia threaded	each	887.00
8884	Stainless steel Female thread Tee for 48.60 mm outer dia X 32 mm nominal dia threaded	each	887.00
8885	Stainless steel Female thread Tee for 48.60 mm outer dia X 40 mm nominal dia threaded	each	887.00
8886	Stainless steel Female thread Tee for 48.60 mm outer dia X 50 mm nominal dia threaded	each	887.00
8887	Stainless steel Female threaded Connector/Adapter for 15.88 mm outer dia X 15 mm nominal threaded	each	190.00
8888	Stainless steel Female threaded Connector/Adapter for 22.22 mm outer dia X 15 mm nominal threaded	each	230.00
8889	Stainless steel Female threaded Connector/Adapter for 22.22 mm outer dia X 20 mm nominal threaded	each	237.00
8890	Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 15 mm nominal threaded	each	277.00
8891	Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 20 mm nominal threaded	each	286.00
8892	Stainless steel Female threaded Connector/Adapter for 28.58 mm outer dia X 25 mm nominal threaded	each	337.00
8893	Stainless steel Female threaded Connector/Adapter for 34.00 mm outer dia X 25 mm nominal threaded	each	409.00
8894	Stainless steel Female threaded Connector/Adapter for 34.00 mm outer dia X 32 mm nominal threaded	each	538.00
8895	Stainless steel Female threaded Connector/Adapter for 42.70 mm outer dia X 32 mm nominal threaded	each	576.00
8896	Stainless steel Female threaded Connector/Adapter for 42.70 mm outer dia X 40 mm nominal threaded	each	681.00
8897	Stainless steel Female threaded Connector/Adapter for 48.60 mm outer dia X 40 mm nominal threaded	each	838.00
8898	Stainless steel Female threaded Connector/Adapter for 48.60 mm outer dia X 50 mm nominal threaded	each	965.00
8899	Stainless steel Male threaded Connector/Adapter for 15.88 mm outer dia X 15 mm nominal threaded	each	193.00
8900	Stainless steel Male threaded Connector/Adapter for 22.22 mm outer dia X 15 mm nominal threaded	each	227.00
8901	Stainless steel Male threaded Connector/Adapter for 22.22 mm outer dia X 20 mm nominal threaded	each	248.00
8902	Stainless steel Male threaded Connector/Adapter for 28.58 mm outer dia X 20 mm nominal threaded	each	313.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8903	Stainless steel Male threaded Connector/Adapter for 28.58 mm outer dia X 25 mm nominal threaded	each	320.00
8904	Stainless steel Male threaded Connector/Adapter for 34.00 mm outer dia X 25 mm nominal threaded	each	461.00
8905	Stainless steel Male threaded Connector/Adapter for 34.00 mm outer dia X 32 mm nominal threaded	each	565.00
8906	Stainless steel Male threaded Connector/Adapter for 42.70 mm outer dia X 32 mm nominal threaded	each	649.00
8907	Stainless steel Male threaded Connector/Adapter for 42.70 mm outer dia X 40 mm nominal threaded	each	726.00
8908	Stainless steel Male threaded Connector/Adapter for 48.60 mm outer dia X 40 mm nominal threaded	each	840.00
8909	Stainless steel Male threaded Connector/Adapter for 48.60 mm outer dia X 50 mm nominal threaded	each	1138.00
8910	Stainless steel Valve Connector for 15.88 mm outer dia X 15 mm nominal dia threaded	each	234.00
8911	Stainless steel Valve Connector for 22.22 mm outer dia X 15 mm nominal dia threaded	each	276.00
8912	Stainless steel Valve Connector for 22.22 mm outer dia X 20 mm nominal dia threaded	each	295.00
8913	Stainless steel Valve Connector for 28.58 mm outer dia X 25 mm nominal dia threaded	each	424.00
8914	Stainless steel Valve Connector for 34.00 mm outer dia X 32 mm nominal dia threaded	each	629.00
8915	Stainless steel Valve Connector for 42.70 mm outer dia X 40 mm nominal dia threaded	each	875.00
8916	Stainless steel Valve Connector for 48.60 mm outer dia X 50 mm nominal dia threaded	each	1176.00
8917	SS Female Threaded Elbow 90° for 15.88 mm outer dia X 15 mm nominal dia threaded	each	150.00
8918	Stainless steel Female Threaded Elbow 90° for 22.22 mm outer dia X 15 mm nominal dia threaded	each	191.00
8919	Stainless steel Female Threaded Elbow 90° for 22.22 mm outer dia X 20 mm nominal dia threaded	each	191.00
8920	Stainless steel Female Threaded Elbow 90° for 28.58 mm outer dia X 25 mm nominal dia threaded	each	205.00
8921	Stainless steel Female Threaded Elbow 90° for 34.00 mm outer dia X 32 mm nominal dia threaded	each	287.00
8922	Stainless steel Female Threaded Elbow 90° for 42.70 mm outer dia X 32 mm nominal dia threaded	each	478.00
8923	Stainless steel Female Threaded Elbow 90° for 42.70 mm outer dia X 40 mm nominal dia threaded	each	478.00
8924	Stainless steel Female Threaded Elbow 90° for 48.60 mm outer dia X 40 mm nominal dia threaded	each	683.00



<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8925	Stainless steel Female Threaded Elbow 90° for 48.60 mm outer dia X 50 mm nominal dia threaded	each	683.00
8926	Stainless steel Male Threaded Elbow 90° for 15.88 mm outer dia X 15 mm nominal dia threaded	each	191.00
8927	Stainless steel Male Threaded Elbow 90° for 22.22 mm outer dia x 15 mm nominal dia threaded	each	205.00
8928	Stainless steel Male Threaded Elbow 90° for 22.22 mm outer dia x 20 mm nominal dia threaded	each	205.00
8929	Stainless steel Male Threaded Elbow 90° for 28.58 mm outer dia x 25 mm nominal dia threaded	each	205.00
8930	Stainless steel Male Threaded Elbow 90° for 34.00 mm outer dia x 25 mm nominal dia threaded	each	287.00
8931	Stainless steel Male Threaded Elbow 90° for 34.00 mm outer dia x 32 mm nominal dia threaded	each	287.00
8932	Stainless steel Male Threaded Elbow 90° for 42.70 mm outer dia x 32 mm nominal dia threaded	each	478.00
8933	Stainless steel Male Threaded Elbow 90° for 42.70 mm outer dia x 40 mm nominal dia threaded	each	478.00
8934	Stainless steel Male Threaded Elbow 90° for 48.60 mm outer dia x 40 mm nominal dia threaded	each	683.00
8935	Stainless steel Male Threaded Elbow 90° for 48.60 mm outer dia x 50 mm nominal dia threaded	each	683.00
8936	Stainless steel Cap for 15.88 mm outer dia pipe	each	45.00
8937	Stainless steel Cap for 22.22 mm outer dia pipe	each	64.00
8938	Stainless steel Cap for 28.58 mm outer dia pipe	each	84.00
8939	Stainless steel Cap for 34.00 mm outer dia pipe	each	173.00
8940	Stainless steel Cap for 42.70 mm outer dia pipe	each	253.00
8941	Stainless steel Cap for 48.60 mm outer dia pipe	each	330.00
8942	Stainless steel Pipe Bridge for 15.88 mm outer dia pipe	each	214.00
8943	Stainless steel Pipe Bridge for 15.88 mm outer dia pipe	each	271.00
8944	Stainless steel Pipe Bridge for 28.58 mm outer dia pipe	each	407.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 18.0 WATER SUPPLY

Code No.	Description	Unit	Rate ₹
<b>PE-AL-PE COMPOSITE PRESSURE PIPES</b>			
18.1	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes testing of joints complete as per direction of the Engineer in charge.		
<b>INTERNAL WORK - EXPOSED ON WALL</b>			
18.1.1	1216 (16 mm OD) pipe	metre	175.40
18.1.2	1620 (20 mm OD) pipe	metre	207.85
18.1.3	2025 (25 mm OD) pipe	metre	264.50
18.1.4	2532 (32 mm OD) pipe	metre	349.45
18.1.5	3240 (40 mm OD) pipe	metre	498.75
18.1.6	4050 (50 mm OD) pipe	metre	642.20
18.2	Providing and fixing Polyethelene-Aluminium- Polyethelene (PE-ALPE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.		
<b>CONCEALED WORK</b> , including cutting chases and making good the wall etc.			
18.2.1	1216 (16 mm OD) pipe	metre	301.10
18.2.2	1620 (20 mm OD) pipe	metre	333.60
18.2.3	2025 (25 mm OD) pipe	metre	398.65
18.2.4	2532 (32 mm OD) pipe	metre	494.20
18.3	Providing and fixing Polyethelene-Aluminium- Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450, U.V. stabilized with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C, including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc., with trenching, refilling and testing of joints complete as per direction of the engineer in charge.		

Code No.	Description	Unit	Rate ₹
<b>External work</b>			
18.3.1	1216 (16 mm OD) pipe	metre	161.40
18.3.2	1620 (20 mm OD ) pipe	metre	185.55
18.3.3	2025 (25 mm OD ) pipe	metre	233.90
18.3.4	2532 (32 mm OD ) pipe	metre	304.85
18.3.5	3240 (40 mm OD ) pipe	metre	434.40
18.3.6	4050 (50 mm OD ) pipe	metre	577.85
<b>C.P.V.C. PIPES</b>			
18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.		
<b>Internal work - Exposed on wall</b>			
18.7.1	15 mm nominal outer dia Pipes	metre	142.95
18.7.2	20 mm nominal outer dia Pipes	metre	179.95
18.7.3	25 mm nominal outer dia Pipes	metre	216.20
18.7.4	32 mm nominal outer dia Pipes	metre	289.05
18.7.5	40 mm nominal outer dia Pipes	metre	385.50
18.7.6	50 mm nominal outer dia Pipes	metre	548.55
18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.		
<b>Concealed work</b> , including cutting chases and making good the walls etc.			
18.8.1	15 mm nominal outer dia Pipes	metre	246.20
18.8.2	20 mm nominal outer dia Pipes	metre	284.85
18.8.3	25 mm nominal outer dia Pipes	metre	333.60
18.8.4	32 mm nominal outer dia Pipes	metre	412.90
18.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.		

Code No.	Description	Unit	Rate ₹
<b>External work</b>			
18.9.1	15 mm nominal outer dia Pipes	metre	120.65
18.9.2	20 mm nominal outer dia Pipes	metre	149.30
18.9.3	25 mm nominal outer dia Pipes	metre	191.65
18.9.4	32 mm nominal outer dia Pipes	metre	250.55
18.9.5	40 mm nominal outer dia Pipes	metre	321.15
18.9.6	50 mm nominal outer dia Pipes	metre	484.25
18.9.7	62.50 mm nominal inner dia Pipes	metre	1081.75
18.9.8	75 mm nominal inner dia Pipes	metre	1201.05
18.9.9	100 mm nominal inner dia Pipes	metre	1618.10
18.9.10	150 mm nominal inner dia Pipes	metre	2408.75
18.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, i/c cutting and making good the walls etc.		
<b>Internal work - Exposed on wall</b>			
18.10.1	15 mm dia nominal bore	metre	186.40
18.10.2	20 mm dia nominal bore	metre	224.15
18.10.3	25 mm dia nominal bore	metre	247.85
18.10.4	32 mm dia nominal bore	metre	308.35
18.10.5	40 mm dia nominal bore	metre	394.15
18.10.6	50 mm dia nominal bore	metre	472.40
18.11	Providing and fixing G.I. Pipes complete with G.I. fittings and clamps, i/c making good the walls etc. concealed pipe, including painting with anti corrosive bitumastic paint, cutting chases and making good the wall :		
18.11.1	15 mm dia nominal bore	metre	285.70
18.11.2	20 mm dia nominal bore	metre	316.20
18.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.		
<b>External work</b>			
18.12.1	15 mm dia nominal bore	metre	160.20
18.12.2	20 mm dia nominal bore	metre	186.30
18.12.3	25 mm dia nominal bore	metre	205.85
18.12.4	32 mm dia nominal bore	metre	247.40
18.12.5	40 mm dia nominal bore	metre	301.05
18.12.6	50 mm dia nominal bore	metre	342.70
18.12.7	65 mm dia nominal bore	metre	451.70
18.12.8	80 mm dia nominal bore	metre	576.30

Code No.	Description	Unit	Rate ₹
18.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :		
18.13.1	25 to 40 mm nominal bore	each	394.15
18.13.2	50 to 80 mm nominal bore	each	771.20
18.14	Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).	Each	347.70
<b>BRASS FITTINGS</b>			
18.15	Providing and fixing brass bib cock of approved quality :		
18.15.1	15 mm nominal bore	each	260.10
18.15.2	20 mm nominal bore	each	280.40
18.16	Providing and fixing brass stop cock of approved quality :		
18.16.1	15 mm nominal bore	each	260.10
18.16.2	20 mm nominal bore	each	280.40
18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
18.17.1	25 mm nominal bore	each	428.20
18.17.1A	20 mm nominal bore	each	396.55
18.17.2	32 mm nominal bore.	each	500.75
18.17.3	40 mm nominal bore	each	584.70
18.17.4	50 mm nominal bore	each	749.90
18.17.5	65 mm nominal bore	each	1286.80
18.17.6	80 mm nominal bore	each	1919.50
18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
18.18.1	15 mm nominal bore	each	287.25
18.18.2	20 mm nominal bore	each	327.05
18.18.3	25 mm nominal bore	each	331.95
18.19	Providing and fixing gun metal non- return valve of approved quality (screwed end) :		
18.19.1	25 mm nominal bore		
18.19.1.1	Horizontal	each	410.45
18.19.1.2	Vertical	each	433.70
18.19.2	32 mm nominal bore		
18.19.2.1	Horizontal	each	552.45
18.19.2.2	Vertical	each	610.55

Code No.	Description	Unit	Rate ₹
18.19.3	40 mm nominal bore		
	18.19.3.1 Horizontal	each	682.85
	18.19.3.2 Vertical	each	845.45
18.19.4	50 mm nominal bore		
	18.19.4.1 Horizontal	each	987.70
	18.19.4.2 Vertical	each	1080.60
18.19.5	65 mm nominal bore		
	18.19.5.1 Horizontal	each	1768.50
	18.19.5.2 Vertical	each	1780.15
18.19.6	80 mm nominal bore		
	18.19.6.1 Horizontal	each	2503.10
	18.19.6.2 Vertical	each	2944.50
18.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :		
	18.20.1 15 mm nominal bore	each	243.60
	18.20.2 20 mm nominal bore	each	280.65
	18.20.3 25 mm nominal bore	each	363.70
18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :		
	18.21.1 30 cm length		
	18.21.1.1 15 mm nominal bore	each	59.40
	18.21.1.2 20 mm nominal bore	each	65.20
	18.21.2 45 cm length		
	18.21.2.1 15 mm nominal bore	each	67.80
	18.21.2.2 20 mm nominal bore	each	82.90
18.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
	18.22.1 100 mm diameter	each	71.65
	18.22.2 150 mm diameter	each	85.90
<b>C.I./DUCTILE IRON PIPES &amp; SPECIALS</b>			
18.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe).	quintal	152.80
18.24	Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc.(excluding cost of specials).	quintal	284.20
18.25	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class):		
	18.25.1 Up to 300 mm dia	quintal	4476.30
	18.25.2 Over 300 mm dia	quintal	4592.45

Code No.	Description	Unit	Rate ₹
18.26	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :		
18.26.1	Up to 300 mm dia	quintal	6683.15
18.26.2	Over 300 mm dia	quintal	6683.15
18.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :		
18.27.1	100 mm dia pipe	metre	1078.25
18.27.2	125 mm dia pipe	metre	1343.80
18.27.3	150 mm dia pipe	metre	1621.60
18.27.4	200 mm dia pipe	metre	2750.55
18.27.5	250 mm dia pipe	metre	3591.65
18.27.6	300 mm dia pipe	metre	4841.60
18.27.7	350 mm dia pipe	metre	5808.35
18.27.8	400 mm dia pipe	metre	7649.30
18.27.9	450 mm dia pipe	metre	9262.10
18.27.10	500 mm dia pipe	metre	10753.40
18.27.11	600 mm dia pipe	metre	15033.60
18.28	Providing lead caulked joints to spun iron or C.I. pipes and specials, including testing of joints but excluding the cost of pig lead :		
18.28.1	100 mm diameter pipe	each	224.65
18.28.2	125 mm diameter pipe	each	332.00
18.28.3	150 mm diameter pipe	each	337.20
18.28.4	200 mm diameter pipe	each	447.50
18.28.5	250 mm diameter pipe	each	559.20
18.28.6	300 mm diameter pipe	each	673.25
18.28.7	350 mm diameter pipe	each	690.85
18.28.8	400 mm diameter pipe	each	904.05
18.28.9	450 mm diameter pipe	each	1013.90
18.28.10	500 mm diameter pipe	each	1072.75
18.28.11	600 mm diameter pipe	each	1449.40
18.29	Supplying pig lead at site of work.	quintal	16039.40
18.30	Providing flanged joints to double flanged C.I./D.I. pipes and specials, including testing of joints :		
18.30.1	80 mm diameter pipe	each	119.55
18.30.2	100 mm diameter pipe	each	193.85
18.30.3	125 mm diameter pipe	each	205.45
18.30.4	150 mm diameter pipe	each	243.05

Code No.	Description	Unit	Rate ₹
18.30.5	200 mm diameter pipe	each	267.45
18.30.6	250 mm diameter pipe	each	369.55
18.30.7	300 mm diameter pipe	each	375.35
18.30.8	350 mm diameter pipe	each	512.05
18.30.9	400 mm diameter pipe	each	725.15
18.30.10	450 mm diameter pipe	each	896.75
18.30.11	500 mm diameter pipe	each	1020.25
18.30.12	600 mm diameter pipe	each	1196.75
<b>C.I. SLUICE VALVES/ FIRE HYDRANTS &amp; FIXTURES</b>			
18.31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :		
18.31.1	100 mm diameter		
	18.31.1.1 Class I	each	3317.55
	18.31.1.2 Class II	each	3689.75
18.31.2	125 mm diameter		
	18.31.2.1 Class I	each	3596.80
	18.31.2.2 Class II	each	4329.10
18.31.3	150 mm diameter		
	18.31.3.1 Class I	each	4881.25
	18.31.3.2 Class II	each	5387.20
18.31.4	200 mm diameter		
	18.31.4.1 Class I	each	9604.50
	18.31.4.2 Class II	each	11316.05
18.31.5	250 mm diameter		
	18.31.5.1 Class I	each	14022.95
	18.31.5.2 Class II	each	18258.85
18.31.6	300 mm diameter		
	18.31.6.1 Class I	each	19468.75
	18.31.6.2 Class II	each	22784.75
18.32	Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 ( 1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size ) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick, finished with a floating coat of neat cement complete as per standard design :		



Code No.	Description	Unit	Rate ₹
18.32.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	1195.35
18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep ( inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size ) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	6849.60
18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size ) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	11842.75
18.35	Constructing masonry Chamber 120x120x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep ( inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.35.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	16334.65
18.36	Constructing masonry Chamber 60x60x75 cm, inside in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep ( inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering		

Code No.	Description	Unit	Rate ₹
	with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.36.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	6529.70
18.37	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 ( 1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :		
18.37.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	each	6088.60
18.38	Painting G.I. pipes and fittings with synthetic enamel white paint with two coats over a ready mixed priming coat, both of approved quality for new work :		
18.38.1	15 mm diameter pipe	metre	9.95
18.38.2	20 mm diameter pipe	metre	11.80
18.38.3	25 mm diameter pipe	metre	15.50
18.38.4	32 mm diameter pipe	metre	18.40
18.38.5	40 mm diameter pipe	metre	21.75
18.38.6	50 mm diameter pipe	metre	25.75
18.39	Repainting G.I. pipes and fittings with synthetic enamel white paint with one coat of approved quality :		
18.39.1	15 mm diameter pipe	metre	5.05
18.39.2	20 mm diameter pipe	metre	5.95
18.39.3	25 mm diameter pipe	metre	7.60
18.39.4	32 mm diameter pipe	metre	9.05
18.39.5	40 mm diameter pipe	metre	10.50
18.39.6	50 mm diameter pipe	metre	12.45
18.40	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
18.40.1	15 mm diameter pipe	metre	6.00
18.40.2	20 mm diameter pipe	metre	7.10
18.40.3	25 mm diameter pipe	metre	9.10
18.40.4	32 mm diameter pipe	metre	10.85
18.40.5	40 mm diameter pipe	metre	12.35

Code No.	Description	Unit	Rate ₹
18.40.6	50 mm diameter pipe	metre	14.80
18.40.7	65 mm diameter pipe	metre	18.25
18.40.8	80 mm diameter pipe	metre	21.20
18.41	Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :		
18.41.1	15 mm diameter pipe	metre	66.80
18.41.2	20 mm diameter pipe	metre	67.70
18.41.3	25 mm diameter pipe	metre	69.50
18.41.4	32 mm diameter pipe	metre	71.30
18.41.5	40 mm diameter pipe	metre	72.25
18.41.6	50 mm diameter pipe	metre	74.95
18.41.7	65 mm diameter pipe	metre	118.30
18.41.8	80 mm diameter pipe	metre	121.90
18.41.9	100 mm diameter pipe	metre	129.10
18.41.10	150 mm diameter pipe	metre	192.30
18.42	Boring with 100 mm diameter casing pipe for hand pump / tubewell, in all soils except ordinary hard rocks requiring blasting, including removing the casing pipe after the hand pump / tube well is lowered and tested :		
18.42.1	Up to 6 metres depth	metre	350.60
18.42.2	Beyond 6 m and up to 12 m depth	metre	416.10
18.42.3	Beyond 12 m and up to 18 m depth	metre	484.10
18.43	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.	metre	604.85
18.44	Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.	metre	273.10
18.45	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	each	913.55
18.46	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :		
18.46.1	15 mm nominal bore	each	147.75
18.46.2	20 mm nominal bore	each	170.95
18.46.3	25 mm nominal bore	each	205.80
18.46.4	32 mm nominal bore	each	240.65
18.46.5	40 mm nominal bore	each	298.75
18.46.6	50 mm nominal bore	each	384.90
18.46.7	65 mm nominal bore	each	617.20
18.46.8	80 mm nominal bore	each	698.50

Code No.	Description	Unit	Rate ₹
18.47	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws, including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :		
18.47.1	15 mm nominal bore	each	366.20
18.47.2	20 mm nominal bore	each	389.45
18.47.3	25 mm nominal bore	each	424.30
18.47.4	32 mm nominal bore	each	459.15
18.47.5	40 mm nominal bore	each	517.20
18.47.6	50 mm nominal bore	each	682.85
18.47.7	65 mm nominal bore	each	915.15
18.47.8	80 mm nominal bore	each	996.45
18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.		
18.48A	Circular tank	per litre	7.25
18.48B	Rectangular tank	per litre	7.25
<b>C.P. BRASS FITTINGS</b>			
18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :		
18.49.1	15 mm nominal bore	each	371.70
18.50	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		
18.50.1	15 mm nominal bore	each	555.30
18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
18.51.1	15 mm nominal bore	each	492.55
18.52	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
18.52.1	15 mm nominal bore	each	545.95
18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
18.53.1	15mm nominal bore	each	475.70
18.53A	Providing and fixing C.P. Brass extension nipple (size 15mmx50mm) of approved make and quality as per direction of Engineer-in-charge.	each	58.10

Code No.	Description	Unit	Rate ₹
<b>PTMT FITTINGS</b>			
18.54	Providing and fixing PTMT bib cock of approved quality and colour.		
18.54.1	15mm nominal bore, 86 mm long, weighing not less than 88 gms	each	103.30
18.54.2	15 mm nominal bore, 122mm long, weighing not less than 99 gms	each	143.95
18.54.3	15 mm nominal bore, 165 mm long, weighing not less than 110 gms	each	157.90
18.54.4	15 mm nominal bore, 90 mm long, weighing not less than 93 gms	each	113.75
18.55	Providing and fixing PTMT stop cock of approved quality and colour.		
18.55.1	15 mm nominal bore, 86 mm long, weighing not less than 88 gms	each	103.30
18.55.2	20 mm nominal bore, 89 mm long, weighing not less than 88 gms	each	134.65
18.55.3	Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms	each	161.40
18.56	Providing and fixing PTMT pillar cock of approved quality and colour		
18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	each	168.90
18.56.2	15 mm nominal bore, 125 mm long foam flow, weighing not less than 120 gms	each	186.30
18.57	Providing and fixing PTMT, push cock of approved quality and colour.		
18.57.1	15 mm nominal bore, 98 mm long, weighing not less than 75 gms	each	91.70
18.57.2	15 mm nominal bore, 80 mm long, weighing not less than 46 gms	each	85.90
18.58	Providing and fixing PTMT grating of approved quality and colour.		
18.58.1	Circular type		
18.58.1.1	100 mm nominal dia	each	32.75
18.58.1.2	125 mm nominal dia with 25 mm waste hole	each	45.55
18.58.2	Rectangular type with openable circular lid		
18.58.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating	each	150.05
<b>AIR VALVE &amp; WATER METER (BULK TYPE)</b>			
18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :		
18.59.1	50 mm dia	each	4662.45
18.59.2	80 mm dia	each	5649.75
18.59.3	100 mm dia	each	7410.80

Code No.	Description	Unit	Rate ₹
18.60	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :		
18.60.1	80 mm dia nominal bore	each	3104.90
18.60.2	100 mm dia nominal bore	each	4638.60
18.60.3	150 mm dia nominal bore	each	6816.05
18.60.4	200 mm dia nominal bore	each	7433.95
18.61	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :		
18.61.1	80 mm dia	each	3633.50
18.61.2	100 mm dia	each	5864.10
18.61.3	150 mm dia	each	7443.40
18.61.4	200 mm dia	each	10430.75
18.62	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.		
18.62.1	15 mm nominal bore, 105 mm long, weighing not less than 138 gms	each	165.30
18.62.2	20 mm nominal bore, 120 mm long, weighing not less than 198 gms	each	216.70
18.62.3	25 mm nominal bore, 152mm long, weighing not less than 440 gms	each	413.25
18.62.4	40 mm nominal bore, 206mm long, weighing not less than 690 gms	each	646.70
18.62.5	50 mm nominal bore, 242mm long, weighing not less than 1240 gms	each	1125.25
18.63	Providing and fixing PTMT angle stop cock 15 mm nominal bore, weighing not less than 85 gms	each	134.65
18.64	Providing and fixing PTMT swivelling shower, 15 mm nominal bore, weighing not less than 40 gms	each	100.70
18.65	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements, weighing not less than 106 gms.	each	112.30
18.66	Providing and laying S&S C.I. Standard specials such as tees, bends, collars tapers and caps etc, suitable for flanged jointing as per IS : 1538 :		
18.66.1	Up to 300 mm dia	quintal	6625.10
18.66.2	Above 300 mm dia	quintal	7856.25

Code No.	Description	Unit	Rate ₹
18.67	Providing and laying S&S C.I. Standard specials suitable for mechanical jointing as per IS : 13382 :		
18.67.1	Up to 300 mm dia	quintal	10748.40
18.67.2	Above 300 mm dia	quintal	11329.15
18.68	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS : 9523 :		
18.68.1	Up to 600 mm dia	quintal	15394.40
18.68.2	Above 600 mm dia	quintal	21201.90
18.69	Providing and laying D.I. Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523 :		
18.69.1	Up to 600 mm dia	quintal	16207.45
18.69.2	Above 600 mm dia	quintal	23118.40
18.70	Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket :		
18.70.1	100 mm dia pipes	joint	65.10
18.70.2	150 mm dia pipes	joint	102.35
18.70.3	200 mm dia pipes	joint	154.30
18.70.4	250 mm dia pipes	joint	187.65
18.70.5	300 mm dia pipes	joint	250.00
18.70.6	350 mm dia pipes	joint	269.75
18.70.7	400 mm dia pipes	joint	434.00
18.70.8	450 mm dia pipes	joint	499.90
18.70.9	500 mm dia pipes	joint	538.65
18.70.10	600 mm dia pipes	joint	693.70
18.70.11	650 mm dia pipes	joint	966.75
18.70.12	700 mm dia pipes	joint	1100.30
18.70.13	800 mm dia pipes	joint	1212.70
18.70.14	900 mm dia pipes	joint	1549.65
18.70.15	1000 mm dia pipes	joint	1820.80
18.71	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536) :		
18.71.1	100 mm dia C.I. Double Flanged Pipe	metre	1640.95
18.71.2	150 mm dia C.I. Double Flanged Pipe	metre	2569.15
18.71.3	200 mm dia C.I. Double Flanged Pipe	metre	4053.40
18.71.4	250 mm dia C.I. Double Flanged Pipe	metre	4902.80
18.71.5	300 mm dia C.I. Double Flanged Pipe	metre	6266.90
18.71.6	350 mm dia C.I. Double Flanged Pipe	metre	7890.95

Code No.	Description	Unit	Rate ₹
18.71.7	400 mm dia C.I. Double Flanged Pipe	metre	10209.65
18.71.8	450 mm dia C.I. Double Flanged Pipe	metre	12997.65
18.71.9	500 mm dia C.I. Double Flanged Pipe	metre	16138.00
18.71.10	600 mm dia C.I. Double Flanged Pipe	metre	22362.05
18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :		
18.72.1	100 mm dia Ductile Iron Class K-7 pipes	metre	926.30
18.72.2	150 mm dia Ductile Iron Class K-7 pipes	metre	1340.10
18.72.3	200 mm dia Ductile Iron Class K-7 pipes	metre	1853.45
18.72.4	250 mm dia Ductile Iron Class K-7 pipes	metre	2509.35
18.72.5	300 mm dia Ductile Iron Class K-7 pipes	metre	3305.00
18.72.6	350 mm dia Ductile Iron Class K-7 pipes	metre	4014.10
18.72.7	400 mm dia Ductile Iron Class K-7 pipes	metre	4807.00
18.72.8	450 mm dia Ductile Iron Class K-7 pipes	metre	5804.50
18.72.9	500 mm dia Ductile Iron Class K-7 pipes	metre	6853.35
18.72.10	600 mm dia Ductile Iron Class K-7 pipes	metre	8853.10
18.72.11	700 mm dia Ductile Iron Class K-7 pipes	metre	11498.05
18.72.12	800 mm dia Ductile Iron Class K-7 pipes	metre	14470.10
18.72.13	900 mm dia Ductile Iron Class K-7 pipes	metre	18620.70
18.72.14	1000 mm dia Ductile Iron Class K-7 pipes	metre	20402.55
18.72.15	100 mm dia Ductile Iron Class K-9 pipes	metre	958.95
18.72.16	150 mm dia Ductile Iron Class K-9 pipes	metre	1438.35
18.72.17	200 mm dia Ductile Iron Class K-9 pipes	metre	1978.85
18.72.18	250 mm dia Ductile Iron Class K-9 pipes	metre	2754.95
18.72.19	300 mm dia Ductile Iron Class K-9 pipes	metre	3426.85
18.72.20	350 mm dia Ductile Iron Class K-9 pipes	metre	4216.25
18.72.21	400 mm dia Ductile Iron Class K-9 pipes	metre	5395.55
18.72.22	450 mm dia Ductile Iron Class K-9 pipes	metre	6238.65
18.72.23	500 mm dia Ductile Iron Class K-9 pipes	metre	7869.80
18.72.24	600 mm dia Ductile Iron Class K-9 pipes	metre	9512.35
18.72.25	700 mm dia Ductile Iron Class K-9 pipes	metre	13138.15
18.72.26	750 mm dia Ductile Iron Class K-9 pipes	metre	14258.40
18.72.27	800 mm dia Ductile Iron Class K-9 pipes	metre	14433.95
18.72.28	900 mm dia Ductile Iron Class K-9 pipes	metre	17420.50
18.72.29	1000 mm dia Ductile Iron Class K-9 pipes	metre	19601.20



Code No.	Description	Unit	Rate ₹
18.73	Providing and laying Double Flanged (Screwed/ Welded) Centrifugally (Spun) Ductile Iron Pipes of Class K - 9 conforming to IS : 8329 :		
18.73.1	100 mm dia Ductile Iron Double Flanged	metre	1377.45
18.73.2	150 mm dia Ductile Iron Double Flanged	metre	2067.10
18.73.3	200 mm dia Ductile Iron Double Flanged	metre	2605.60
18.73.4	250 mm dia Ductile Iron Double Flanged	metre	3699.25
18.73.5	300 mm dia Ductile Iron Double Flanged	metre	4752.05
18.73.6	350 mm dia Ductile Iron Double Flanged	metre	5986.80
18.73.7	400 mm dia Ductile Iron Double Flanged	metre	7689.95
18.73.8	450 mm dia Ductile Iron Double Flanged	metre	8094.85
18.73.9	500 mm dia Ductile Iron Double Flanged	metre	11451.10
18.73.10	600 mm dia Ductile Iron Double Flanged	metre	15166.40
18.73.11	700 mm dia Ductile Iron Double Flanged	metre	17944.80
18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.		
18.74.1	15 mm nominal bore with 30cm length	each	61.70
18.74.2	15 mm nominal bore with 45 cm length	each	66.65
18.75	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		
18.75.1	15 mm nominal bore, weighing not less than 32 gms	each	28.85
18.75.2	20 mm nominal bore, weighing not less than 40 gms	each	39.30
18.75.3	25mm nominal bore, weighing not less than 62 gms	each	53.25
18.76	Cutting holes up to 30x30 cm in walls including making good the same:		
18.76.1	With common burnt clay F.P.S. (non modular) bricks	each	219.20
18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	each	209.25
18.78	Making chases up to 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	metre	93.85
18.79	Making hole up to 20x20 cm and embedding pipes up to 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand 6 graded stone aggregate 20 mm nominal size) including disposal of malba.	metre	134.55
18.80	Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.		

Code No.	Description	Unit	Rate ₹
18.80.1	80 mm diameter C.I. pipe	100 metre	782.70
18.80.2	100 mm diameter C.I. pipe	100 metre	1029.70
18.80.3	125 mm diameter C.I. pipe	100 metre	1288.00
18.80.4	150 mm diameter C.I. pipe	100 metre	1547.80
18.80.5	200 mm diameter C.I. pipe	100 metre	2070.15
18.80.6	250 mm diameter C.I. pipe	100 metre	2611.60
18.80.7	300 mm diameter C.I. pipe	100 metre	2916.55
18.80.8	350 mm diameter C.I. pipe	100 metre	3233.20
18.80.9	400 mm diameter C.I. pipe	100 metre	3568.55
18.80.10	450 mm diameter C.I. pipe	100 metre	3910.65
18.80.11	500 mm diameter C.I. pipe	100 metre	4272.65
18.80.12	600 mm diameter C.I. pipe	100 metre	5013.35
18.81	Extra for every operation of disinfecting the C.I. main by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :		
18.81.1	80 mm diameter C.I. pipe	100 metre	286.65
18.81.2	100 mm diameter C.I. pipe	100 metre	351.15
18.81.3	125 mm diameter C.I. pipe	100 metre	429.70
18.81.4	150 mm diameter C.I. pipe	100 metre	501.70
18.81.5	200 mm diameter C.I. pipe	100 metre	765.15
18.81.6	250 mm diameter C.I. pipe	100 metre	882.05
18.81.7	300 mm diameter C.I. pipe	100 metre	993.35
18.81.8	350 mm diameter C.I. pipe	100 metre	1167.05
18.81.9	400 mm diameter C.I. pipe	100 metre	1343.25
18.81.10	450 mm diameter C.I. pipe	100 metre	1525.35
18.81.11	500 mm diameter C.I. pipe	100 metre	1709.20
18.81.12	600 mm diameter C.I. pipe	100 metre	2086.20
18.82	Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks, including stacking of pipes at site lead up to 50 metre:		
18.82.1	80 mm diameter C.I. pipe	metre	175.85
18.82.2	100 mm diameter C.I. pipe	metre	183.15
18.82.3	125 mm diameter C.I. pipe	metre	190.05
18.82.4	150 mm diameter C.I. pipe	metre	197.20
18.82.5	200 mm diameter C.I. pipe	metre	219.85
18.82.6	250 mm diameter C.I. pipe	metre	242.00

Code No.	Description	Unit	Rate ₹
18.82.7	300 mm diameter C.I. pipe	metre	261.55
18.82.8	350 mm diameter C.I. pipe	metre	279.95
18.82.9	400 mm diameter C.I. pipe	metre	296.95
18.82.10	450 mm diameter C.I. pipe	metre	314.40
18.82.11	500 mm diameter C.I. pipe	metre	329.75
18.82.12	600 mm diameter C.I. pipe	metre	356.65
18.83	Labour for cutting C.I. pipe with steel saw.		
18.83.1	80 mm diameter C.I. pipe	Each cut	63.25
18.83.2	100 mm diameter C.I. pipe	Each cut	84.95
18.83.3	125 mm diameter C.I. pipe	Each cut	118.15
18.83.4	150 mm diameter C.I. pipe	Each cut	159.65
18.83.5	200 mm diameter C.I. pipe	Each cut	213.00
18.83.6	250 mm diameter C.I. pipe	Each cut	264.45
18.83.7	300 mm diameter C.I. pipe	Each cut	317.80
18.83.8	350 mm diameter C.I. pipe	Each cut	369.25
18.83.9	400 mm diameter C.I. pipe	Each cut	422.30
18.83.10	450 mm diameter C.I. pipe	Each cut	474.05
18.83.11	500 mm diameter C.I. pipe	Each cut	527.10
18.83.12	600 mm diameter C.I. pipe	Each cut	628.25
18.84	Providing & fixing chrome plated brass battery based infrared sensor operated pillar cock, having foam flow technology.		
18.84.1	15 mm nominal bore	each	6752.90
18.85	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00 m spacing including cutting and making good the walls including testing of joints complete as per direction of Engineer-in-charge. (The pipe length inserted in the fitting shall not be measured for payment)		
	<b>Inernal work Exposed on wall</b>		
18.85.1	15.88 mm outer dia pipe	metre	255.00
18.85.2	22.22 mm outer dia Pipe	metre	391.60
18.85.3	28.58 mm outer dia Pipe	metre	477.25
18.85.4	34.00 mm outer dia Pipe	metre	645.60
18.85.5	42.70 mm outer dia Pipe	metre	666.60
18.85.6	48.60 mm outer dia Pipe	metre	794.65

Code No.	Description	Unit	Rate ₹
18.86	Providing and fixing Stainless Steel pipe and fitting of grade AISI 304 as per JIS standard 3448 complete with press type fitting (fitting shall be paid for separately) i/c fixing of the pipe with clamps at 1.00m spacing and also including cutting of chases and making good the walls including testing of joints complete as per direction of Engineer -in-charge. (The pipe length inserted in the fitting shall not be measured for payment)		
	<b>Internal work - Concealed Pipe</b>		
18.86.1	15.88 mm outer dia .Pipes.	metre	348.30
18.86.2	22.22 mm Outer dia pipes	metre	484.90
18.87	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Coupling/Socket</b>		
18.87.1	For 15.88 mm outer dia pipe	each	48.80
18.87.2	For 22.22 mm outer dia pipe	each	73.15
18.87.3	For 28.58 mm outer dia pipe	each	103.35
18.87.4	For 34.00 mm outer dia pipe	each	152.15
18.87.5	For 42.70 mm outer dia pipe	each	183.50
18.87.6	For 48.60 mm outer dia pipe	each	209.05
18.88	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Reducer</b>		
18.88.1	For 22.22 mm x 15.88 mm outer dia pipe	each	119.65
18.88.2	For 28.58 mm x 15.88 mm outer dia pipe	each	163.75
18.88.3	For 28.58 mm x 22.22 mm outer dia pipe	each	168.40
18.88.4	For 34.00 mm x 15.88 mm outer dia pipe	each	213.70
18.88.5	For 34.00 mm x 22.22 mm outer dia pipe	each	217.20
18.88.6	For 34.00 mm x 28.58 mm outer dia pipe	each	220.70
18.88.7	For 42.70 mm x 15.88 mm outer dia pipe	each	417.00
18.88.8	For 42.70 mm x 22.22 mm outer dia pipe	each	420.45
18.88.9	For 42.70 mm x 28.58 mm outer dia pipe	each	420.45
18.88.10	For 42.70 mm x 34.00 mm outer dia pipe	each	449.50

Code No.	Description	Unit	Rate ₹
18.88.11	For 48.60 mm x 15.88 mm outer dia pipe	each	476.20
18.88.12	For 48.60 mm x 22.22 mm outer dia pipe	each	476.20
18.88.13	For 48.60 mm x 28.58 mm outer dia pipe	each	476.20
18.88.14	For 48.60 mm x 34.00 mm outer dia pipe	each	476.20
18.88.15	For 48.60 mm x 42.70 mm outer dia pipe	each	476.20
18.89	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Slip Coupling/ Socket</b>		
18.89.1	For 15.88 mm outer dia pipe	each	54.60
18.89.2	For 22.22 mm outer dia pipe	each	73.15
18.89.3	For 28.58 mm outer dia pipe	each	103.35
18.89.4	For 34.00 mm outer dia pipe	each	152.15
18.89.5	For 42.70 mm outer dia pipe	each	183.50
18.89.6	For 48.60 mm outer dia pipe	each	197.45
18.90	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Elbow 90°</b>		
18.90.1	For 15.88mm outer dia pipe	each	67.35
18.90.2	For 22.22 mm outer dia pipe	each	73.15
18.90.3	For 28.58 mm outer dia pipe	each	111.50
18.90.4	For 34.00 mm outer dia pipe	each	126.60
18.90.5	For 42.70 mm outer dia pipe	each	134.75
18.90.6	For 48.60 mm outer dia pipe	each	174.25
18.91	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Reducing Elbow 90°</b>		
18.91.1	For 22.22 mm x 15.88 mm outer dia pipe	each	171.90
18.91.2	For 28.58 mm x 15.88 mm outer dia pipe	each	221.85
18.91.3	For 28.58 mm x 22.22 mm outer dia pipe	each	256.70
18.91.4	For 34.00 mm x 22.22 mm outer dia pipe	each	333.35
18.91.5	For 34.00 mm x 28.58 mm outer dia pipe	each	459.95
18.91.6	For 42.70 mm x 34.00 mm outer dia pipe	each	207.90

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
18.92	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Equal Tee</b>		
18.92.1	For 15.88 mm outer dia pipe	each	184.70
18.92.2	For 22.22 mm outer dia pipe	each	268.30
18.92.3	For 28.58 mm outer dia pipe	each	317.10
18.92.4	For 34.00 mm outer dia pipe	each	507.60
18.92.5	For 42.70 mm outer dia pipe	each	793.30
18.92.6	For 48.60 mm outer dia pipe	each	1030.25
18.93	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Reducing Tee</b>		
18.93.1	For 22.22 mm x 15.88 mm outer dia pipe	each	207.90
18.93.2	For 28.58 mm x 15.88 mm outer dia pipe	each	317.10
18.93.3	For 28.58 mm x 22.22 mm outer dia pipe	each	317.10
18.93.4	For 34.00 mm x 15.88 mm outer dia pipe	each	507.60
18.93.5	For 34.00 mm x 22.22 mm outer dia pipe	each	507.60
18.93.6	For 34.00 mm x 28.58 mm outer dia pipe	each	507.60
18.93.7	For 42.70 mm x 15.88 mm outer dia pipe	each	793.30
18.93.8	For 42.70 mm x 22.22 mm outer dia pipe	each	793.30
18.93.9	For 42.70 mm x 28.58 mm outer dia pipe	each	793.30
18.93.10	For 42.70 mm x 34.00 mm outer dia pipe	each	793.30
18.93.11	For 48.60 mm x 15.88 mm outer dia pipe	each	1030.25
18.93.12	For 48.60 mm x 22.22 mm outer dia pipe	each	1030.25
18.93.13	For 48.60 mm x 28.58 mm outer dia pipe	each	1030.25
18.93.14	For 48.60 mm x 34.00 mm outer dia pipe	each	1030.25
18.93.15	For 48.60 mm x 42.70 mm outer dia pipe	each	1030.25
18.94	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Male Thread Tee</b>		
18.94.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	207.90
18.94.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	232.30

Code No.	Description	Unit	Rate ₹
18.94.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	238.10
18.94.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	317.10
18.94.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	317.10
18.94.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	317.10
18.94.7	For 34.00 mm outer dia x 15 mm nominal dia threaded	each	507.60
18.94.8	For 34.00 mm outer dia x 20 mm nominal dia threaded	each	507.60
18.94.9	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	507.60
18.94.10	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	507.60
18.94.11	For 42.70 mm outer dia x 15 mm nominal dia threaded	each	793.30
18.94.12	For 42.70 mm outer dia x 20 mm nominal dia threaded	each	793.30
18.94.13	For 42.70 mm outer dia x 25 mm nominal dia threaded	each	793.30
18.94.14	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	793.30
18.94.15	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	793.30
18.94.16	For 48.60 mm outer dia x 15 mm nominal dia threaded	each	1030.25
18.94.17	For 48.60 mm outer dia x 20 mm nominal dia threaded	each	1030.25
18.94.18	For 48.60 mm outer dia x 25 mm nominal dia threaded	each	1030.25
18.94.19	For 48.60 mm outer dia x 32 mm nominal dia threaded	each	1030.25
18.94.20	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	1030.25
18.94.21	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1030.25
18.95	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Female Thread Tee</b>		
18.95.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	207.90
18.95.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	232.30
18.95.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	232.30
18.95.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	317.10
18.95.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	317.10
18.95.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	317.10
18.95.7	For 34.00 mm outer dia x 15 mm nominal dia threaded	each	507.60
18.95.8	For 34.00 mm outer dia x 20 mm nominal dia threaded	each	507.60
18.95.9	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	507.60
18.95.10	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	507.60
18.95.11	For 42.70 mm outer dia x 15 mm nominal dia threaded	each	793.30
18.95.12	For 42.70 mm outer dia x 20 mm nominal dia threaded	each	793.30
18.95.13	For 42.70 mm outer dia x 25 mm nominal dia threaded	each	793.30

Code No.	Description	Unit	Rate ₹
18.95.14	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	793.30
18.95.15	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	793.30
18.95.16	For 48.60 mm outer dia x 15 mm nominal dia threaded	each	1030.25
18.95.17	For 48.60 mm outer dia x 20 mm nominal dia threaded	each	1030.25
18.95.18	For 48.60 mm outer dia x 25 mm nominal dia threaded	each	1030.25
18.95.19	For 48.60 mm outer dia x 32 mm nominal dia threaded	each	1030.25
18.95.20	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	1030.25
18.95.21	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1030.25
18.96	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Female Thread Connector/ Adapter</b>		
18.96.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	220.70
18.96.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	267.15
18.96.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	275.30
18.96.4	For 28.58 mm outer dia x 15 mm nominal dia threaded	each	321.75
18.96.5	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	332.20
18.96.6	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	391.45
18.96.7	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	475.05
18.96.8	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	624.90
18.96.9	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	669.00
18.96.10	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	791.00
18.96.11	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	973.35
18.96.12	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1120.85
18.97	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Male Thread Connector/ Adapter</b>		
18.97.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	224.15
18.97.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	263.65
18.97.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	288.05
18.97.4	For 28.58 mm outer dia x 20 mm nominal dia threaded	each	363.55
18.97.5	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	371.70
18.97.6	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	535.45
18.97.7	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	656.25
18.97.8	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	753.80



Code No.	Description	Unit	Rate ₹
18.97.9	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	843.25
18.97.10	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	975.65
18.97.11	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1321.80
18.98	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Valve Connector</b>		
18.98.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	271.80
18.98.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	320.55
18.98.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	342.65
18.98.4	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	492.50
18.98.5	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	730.60
18.98.6	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	1016.30
18.98.7	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	1365.90
18.99	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Female Threaded Elbow 90°</b>		
18.99.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	174.25
18.99.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	221.85
18.99.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	221.85
18.99.4	For 25.58 mm outer dia x 25 mm nominal dia threaded	each	238.10
18.99.5	For 34.00 mm outer dia x 32 mm nominal dia threaded	each	333.35
18.99.6	For 42.70 mm outer dia x 32 mm nominal dia threaded	each	555.20
18.99.7	For 42.70 mm outer dia x 40 mm nominal dia threaded	each	555.20
18.99.8	For 48.60 mm outer dia x 40 mm nominal dia threaded	each	793.30
18.99.9	For 48.60 mm outer dia x 50 mm nominal dia threaded	each	793.30
18.100	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Male Threaded Elbow 90°</b>		
18.100.1	For 15.88 mm outer dia x 15 mm nominal dia threaded	each	221.85
18.100.2	For 22.22 mm outer dia x 15 mm nominal dia threaded	each	238.10
18.100.3	For 22.22 mm outer dia x 20 mm nominal dia threaded	each	238.10
18.100.4	For 28.58 mm outer dia x 25 mm nominal dia threaded	each	238.10
18.100.5	For 34.00 mm outer dia x 25 mm nominal dia threaded	each	333.35

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
	18.100.6 For 34.00 mm outer dia x 32 mm nominal dia threaded	each	333.35
	18.100.7 For 42.70 mm outer dia x 32 mm nominal dia threaded	each	555.20
	18.100.8 For 42.70 mm outer dia x 40 mm nominal dia threaded	each	555.20
	18.100.9 For 48.60 mm outer dia x 40 mm nominal dia threaded	each	793.30
	18.100.10 For 48.60 mm outer dia x 50 mm nominal dia threaded	each	793.30
18.101	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Cap</b>		
	18.101.1 For 15.88 mm outer dia pipe	each	52.25
	18.101.2 For 22.22 mm outer dia pipe	each	74.35
	18.101.3 For 28.58 mm outer dia pipe	each	97.55
	18.101.4 For 34.00 mm outer dia pipe	each	200.95
	18.101.5 For 42.70 mm outer dia pipe	each	293.85
	18.101.6 For 48.60 mm outer dia pipe	each	383.30
18.102	Providing and fixing required Stainless Steel Fitting of press fit design of grade AISI 304 conforming to JWWA G116 standard with V-profile or M-profile and with O-ring sealing gasket of EPDM material of required dia as per direction of Engineer-in-charge.		
	<b>Pipe Bridge</b>		
	18.102.1 For 15.88 mm outer dia pipe	each	248.55
	18.102.2 For 22.22 mm outer dia pipe	each	314.75
	18.102.3 For 28.58 mm outer dia pipe	each	472.75

**SUB HEAD : 19.0**

**DRAINAGE**

**BASIC RATES (SH: 19.0 DRAINAGE)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0101	Bhisti	day	407.00
0103	Blacksmith 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0285	Brick Aggregate (Single size) : 63 mm nominal size	cum	750.00
0287	Brick Aggregate (Single size) : 40 mm nominal size	cum	750.00
0362	Brick bats	cum	500.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0983	Fine sand (zone IV)	cum	760.00
1003	Mild steel round bar above 12 mm dia	quintal	3575.00
1006	Mild steel square bars	quintal	3675.00
1336	Clearing eye with chain and lid 100 mm dia	each	44.00
1337	Clearing eye with chain and lid 150 mm dia	each	50.00
1352	C.I. cover and frame 300x300 mm inside	each	300.00
1353	C.I. cover without frame 300x300 mm inside i/c cover of 4.50 kg	each	225.00
1354	Rectangular cover 455x610 mm with frame (low duty)	each	1500.00
1355	Rectangular cover 455x610 mm without frame (low duty)	each	1000.00
1356	500 mm dia cover with frame (medium duty)	each	4750.00
1357	500 mm dia cover without frame (medium duty)	each	2300.00
1364	C.I. grating 100x100 mm	each	15.00
1366	C.I. grating 150x150 mm	each	25.00
1367	C.I. grating 180x180 mm	each	30.00
1617	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100 mm dia	each	1150.00
1618	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 150 mm dia	each	1750.00
1621	S.C.I. plain bend 100 mm dia	each	350.00
1622	S.C.I. plain bend 150 mm dia	each	400.00
1628	S.C.I. plain single equal junctions 100x100x100 mm dia	each	450.00
1700	R.C.C. pipes NP2 class 100 mm dia	metre	200.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
1701	R.C.C. pipes NP2 class 150 mm dia	metre	210.00
1702	R.C.C. pipes NP2 class 250 mm dia	metre	260.00
1703	R.C.C. pipes NP2 class 300 mm dia	metre	300.00
1704	R.C.C. pipes NP2 class 450 mm dia	metre	400.00
1705	R.C.C. pipes NP2 class 500 mm dia	metre	580.00
1706	R.C.C. pipes NP2 class 600 mm dia	metre	920.00
1707	R.C.C. pipes NP2 class 700 mm dia	metre	1050.00
1709	R.C.C. pipes NP2 class 800 mm dia	metre	1170.00
1710	R.C.C. pipes NP2 class 900 mm dia	metre	1280.00
1711	R.C.C. pipes NP2 class 1000 mm dia	metre	1590.00
1712	R.C.C. pipes NP2 class 1100 mm dia	metre	1875.00
1713	R.C.C. pipes NP2 class 1200 mm dia	metre	1677.00
1714	R.C.C. collars NP2 class 100 mm dia	each	30.00
1715	R.C.C. collars NP2 class 150 mm dia	each	35.00
1716	R.C.C. collars NP2 class 250 mm dia	each	50.00
1717	R.C.C. collars NP2 class 300 mm dia	each	55.00
1718	R.C.C. collars NP2 class 450 mm dia	each	100.00
1719	R.C.C. collars NP2 class 500 mm dia	each	115.00
1720	R.C.C. collars NP2 class 600 mm dia	each	140.00
1721	R.C.C. collars NP2 class 700 mm dia	each	150.00
1723	R.C.C. collars NP2 class 800 mm dia	each	200.00
1724	R.C.C. collars NP2 class 900 mm dia	each	235.00
1725	R.C.C. collars NP2 class 1000 mm dia	each	280.00
1726	R.C.C. collars NP2 class 1100 mm dia	each	300.00
1727	R.C.C. collars NP2 class 1200 mm dia	each	350.00
1728	RCC pipe 450 mm dia NP-3 spigot	metre	1496.00
1729	RCC pipe 600 mm dia NP-3 spigot	metre	1995.00
1730	RCC pipe 900 mm dia NP-3 spigot	metre	3150.00
1731	RCC pipe 1000 mm dia NP-3 spigot	metre	3885.00
1732	RCC pipe 1200 mm dia NP-3 spigot	metre	5040.00
1733	RCC pipe 1800 mm dia NP-3 spigot	metre	9450.00
1734	RCC pipe 450 mm dia NP-4 spigot	metre	1733.00
1735	RCC pipe 600 mm dia NP-4 spigot	metre	2310.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
1736	RCC pipe 900 mm dia NP-4 spigot	metre	4494.00
1737	RCC pipe 1000 mm dia NP-4 spigot	metre	5565.00
1738	RCC pipe 1200 mm dia NP-4 spigot	metre	6510.00
1739	RCC pipe 1800 mm dia NP-4 spigot	metre	13650.00
1854	Stoneware pipes grade A (60 cm long) 100 mm dia	each	50.00
1855	Stoneware pipes grade A (60 cm long) 150 mm dia	each	80.00
1856	Stoneware pipes grade A (60 cm long) 200 mm dia	each	110.00
1858	Stoneware pipes grade A (60 cm long) 250 mm dia	each	210.00
1859	Stoneware pipes grade A (60 cm long) 300 mm dia	each	240.00
1881	Spun yarn	kilogram	50.00
1900	S.W. gully trap P type 100x100 mm	each	90.00
1902	S.W. gully trap P type 150x100 mm	each	130.00
1904	S.W. gully trap P type 180x150 mm	each	225.00
2201	Carriage of Bricks	1000 Nos	276.72
2209	Carriage of Cement	tonne	92.24
2224	Carriage of S.W. pipes 100 mm dia	100 metre	138.36
2225	Carriage of S.W. pipes 150 mm dia	100 metre	276.72
2226	Carriage of S.W. pipes 200 mm dia	100 metre	461.19
2228	Carriage of S.W. pipes 250 mm dia	100 metre	790.62
2229	Carriage of S.W. pipes 300 mm dia	100 metre	988.27
2260	Carriage of Brick aggregate	cum	112.79
2261	Carriage of Fine sand (1 part badarpur sand: 2 parts jamuna sand)	cum	103.77
2272	Carriage of stainless steel pipe below 100 mm dia	tonne	92.24
2275	Carriage of R.C.C. pipes 100 mm dia	100 metre	226.82
2281	Carriage of R.C.C. pipes 150 mm dia	100 metre	378.03
2287	Carriage of R.C.C. pipes 250 mm dia	100 metre	873.84
2290	Carriage of R.C.C. pipes 300 mm dia	100 metre	1080.08
2299	Carriage of R.C.C. pipes 450 & 500 mm dia	100 metre	2520.19
2303	Carriage of R.C.C. pipes 600,700,750 & 800 mm dia	100 metre	3780.28
2331	Carriage of R.C.C. pipes 900 mm dia	100 metre	5670.42
2332	Carriage of R.C.C. pipes 1000 mm dia	100 metre	7560.57
2333	Carriage of R.C.C. pipes 1100 mm dia	100 metre	7560.57
2334	Carriage of R.C.C. pipes 1200 mm dia	100 metre	7560.57

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
2336	Carriage of R.C.C. pipe above 1200 mm dia and upto 1800 mm dia	100 metre	7560.57
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	4500.00
3860	560 mm dia cover with frame (Heavy duty)	each	9000.00
3861	560 mm dia cover without frame (Heavy duty)	each	5000.00
7087	S.C.I. Tee 150 mm	each	600.00
7128	S.W. intercepting trap 100 mm dia	each	190.00
7129	S.W. intercepting trap 150 mm dia	each	250.00
7130	Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	700.00
7131	Square shape 450x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	600.00
7132	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25	each	600.00
7133	Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10	each	700.00
7134	Circular shape 500 mm dia precast R.C.C. manhole cover with frame- M.D.-10	each	600.00
7135	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	920.00
7136	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - E.H.D. - 35	each	1225.00
7354	Plastic encapsulated M.S. foot rest 30x20x15 cm	each	115.00
7380	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	650.00
7381	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	245.00
8701	SS pipe 304 grades with fresh fit technology as per JIS 3448 standards. 48.60 mm outer dia	metre	584.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 19.0 DRAINAGE

Code No.	Description	Unit	Rate ₹
	<b>NOTE</b> : - The rates given for all the items under sub-head 'Drainage' are applicable to work executed in soils above sub- soil water level. Extra allowance has to be made for work under sub- soil water level.		
	<b>STONE WARE PIPES AND FITTINGS</b>		
19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
19.1.1	100 mm diameter	metre	216.25
19.1.2	150 mm diameter	metre	327.05
19.1.3	200 mm diameter	metre	423.35
19.1.4	250 mm diameter	metre	692.50
19.1.5	300 mm diameter	metre	788.70
19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design :		
19.2.1	100 mm diameter S.W. pipe	metre	622.95
19.2.2	150 mm diameter S.W. pipe	metre	761.85
19.2.3	200 mm diameter S.W. pipe	metre	888.10
19.2.4	250 mm diameter S.W. pipe	metre	1027.00
19.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design :		
19.3.1	100 mm diameter S.W. pipe	metre	296.05
19.3.2	150 mm diameter S.W. pipe	metre	479.85
19.3.3	200 mm diameter S.W. pipe	metre	564.00
19.3.4	250 mm diameter S.W. pipe	metre	656.60
19.3.5	300 mm diameter S.W. pipe	metre	757.60
19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:		
19.4.1	100x100 mm size P type		
19.4.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1602.40
19.4.1.2	With Sewer bricks conforming to IS : 4885	each	1619.55



Code No.	Description	Unit	Rate ₹
19.4.2	150 x 100 mm size P type		
19.4.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1623.25
19.4.2.2	With sewer bricks conforming to IS : 4885	each	1640.35
19.4.3	180x150 mm size P type		
19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	1706.55
19.4.3.2	With Sewer bricks conforming to IS : 4885	each	1723.65
19.5	Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps :		
19.5.1	100 mm diameter	metre	36.35
19.5.2	150 mm diameter	metre	40.15
19.5.3	200 mm diameter	metre	42.75
19.5.4	250 mm diameter	metre	45.30
19.5.5	300 mm diameter	metre	47.85
19.5.6	350 mm diameter	metre	55.15
19.5.7	400 mm diameter	metre	60.25
19.5.8	450 mm diameter	metre	62.85
19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :		
19.6.1	100 mm dia. R.C.C. pipe	metre	325.55
19.6.2	150 mm dia. R.C.C. pipe	metre	356.70
19.6.3	250 mm dia. R.C.C. pipe	metre	482.05
19.6.4	300 mm dia. R.C.C. pipe	metre	518.55
19.6.5	450 mm dia. R.C.C. pipe	metre	720.95
19.6.6	500 mm dia. R.C.C. pipe	metre	950.30
19.6.7	600 mm dia. R.C.C. pipe	metre	1397.10
19.6.8	700 mm dia. R.C.C. pipe	metre	1582.85
19.6.9	800 mm dia. R.C.C. pipe	metre	1770.85
19.6.10	900 mm dia. R.C.C. pipe	metre	1988.95
19.6.11	1000 mm dia. R.C.C. pipe	metre	2465.50
19.6.12	1100 mm dia. R.C.C. pipe	metre	2911.55
19.6.13	1200 mm dia. R.C.C. pipe	metre	2828.15

Code No.	Description	Unit	Rate ₹
19.7	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :		
19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		
19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	8634.10
19.7.1.2	With Sewer bricks conforming to IS : 4885	each	8678.85
19.7.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :		
19.7.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	18422.40
19.7.2.2	With Sewer bricks conforming to IS : 4885	each	18544.90
19.7.3	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :		
19.7.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	22983.25
19.7.3.2	With Sewer bricks conforming to IS : 4885	each	23088.60
19.8	Extra for depth for manholes :		
19.8.1	Size 90x80 cm		
19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	5718.60
19.8.1.2	With Sewer bricks conforming to IS : 4885	metre	5848.95
19.8.2	Size 120x90 cm		
19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	6850.70
19.8.2.2	With Sewer bricks conforming to IS : 4885	metre	7006.10

Code No.	Description	Unit	Rate ₹
19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		
19.9.1	0.91 m deep with SFRC cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :		
19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	8683.75
19.9.1.2	With Sewer bricks conforming to IS : 4885	each	8743.70
19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m		
19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	4911.80
19.10.2	With Sewer bricks conforming IS : 4885	metre	5020.95
19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		
19.11.1	1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :		
19.11.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	16560.80
19.11.1.2	With Sewer bricks conforming IS : 4885	each	16720.90

Code No.	Description	Unit	Rate ₹
19.12	Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68 m to 2.29 m :		
19.12.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	6362.65
19.12.2	With Sewer bricks conforming IS : 4885	metre	6505.15
19.13	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :		
19.13.1	2.30 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :		
19.13.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	35380.05
19.13.1.2	With Sewer bricks conforming IS : 4885	each	35845.05
19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m :		
19.14.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	15028.55
19.14.2	With Sewer bricks conforming IS : 4885	metre	15397.05
19.15	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design :		
19.15.1	With 20x20 mm square bar	each	267.95
19.15.2	With 20 mm diameter round bar	each	240.25
19.16	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and		

Code No.	Description	Unit	Rate ₹
	chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	each	327.90
19.17	Replacement of M.S. foot rests in manholes including dismantling concrete blocks and fixing with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size):		
19.17.1	With 20x20 mm square bar	each	321.90
19.17.2	With 20 mm diameter round bar	each	294.20
19.18	Supplying and fixing C.I. cover without frame for manholes :		
19.18.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg	each	1227.15
19.18.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg	each	2749.80
19.18.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg	each	5891.20
19.19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality		
19.19.1	L D- 2.5		
19.19.1.1	Rectangular shape 600x450 mm internal dimensions	each	1073.05
19.19.1.2	Square shape 450 mm internal dimensions	each	902.10
19.19.1.3	Circular shape 450 mm internal diameter	each	902.10
19.19.2	M D - 10		
19.19.2.1	Square shape 450 mm internal dimension	each	1079.35
19.19.2.2	Circular shape 500 mm internal diameter	each	908.35
19.19.3	H D - 20		
19.19.3.1	Circular shape 560 mm internal diameter	each	1300.95
19.19.4	EHD - 35		
19.19.4.1	Circular shape 560 mm internal dia	each	1655.20
19.20	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5 kg	each	279.60
19.21	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :		
19.21.1	For pipes 100 to 250 mm diameter	each	391.15

Code No.	Description	Unit	Rate ₹
	19.21.2 For pipes 250 to 300 mm diameter	each	463.45
	19.21.3 For pipes 350 to 450 mm diameter	each	674.15
19.22	Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centering and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall, lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :		
	19.22.1 100 mm dia sand cast iron drop connection	each	6637.60
	19.22.2 150 mm dia sand cast iron drop connection	each	8902.10
19.23	Extra for depths beyond 60 cm of sand cast iron drop connection complete:		
	19.23.1 For 100 mm dia sand cast iron drop connection	metre	1969.60
	19.23.2 For 150 mm dia sand cast iron drop connection	metre	2589.00
19.24	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame, including stacking of useful materials near the site and disposal of unserviceable materials, all as per direction of Engineer -in-Charge :		
	19.24.1 Rectangular manhole 90x80 cm and 45 cm deep	each	1044.95
	19.24.2 Rectangular manhole 120x90 cm and 90 cm deep	each	1836.60
	19.24.3 Rectangular arch type manhole 140x90 cm and 2.45 m deep	each	3474.50
	19.24.4 Circular manhole 122 cm diameter and 1.68 m deep	each	2660.05
19.25	Extra for depth of manholes dismantled :		
	19.25.1 Rectangular manhole 90x80 cm and beyond 45 cm depth	metre	838.00
	19.25.2 Rectangular manhole 120x90 cm and beyond 90 cm depth	metre	998.10
	19.25.3 Rectangular arch type manhole 140x90 cm and beyond 2.45 m depth (up to 4.25 m depth)	metre	808.40
	19.25.4 Circular manhole 122 cm diameter and beyond 1.68 m depth (up to 2.29 m depth)	metre	911.95
19.26	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :		
	19.26.1 Rectangular manhole 90x80 cm with rectangular cover 600 x 450 mm of grade LD - 2.5	each	1735.30

Code No.	Description	Unit	Rate ₹
19.26.2	Rectangular manhole 120x90 cm with circular cover 500 mm dia of grade MD - 10	each	2719.20
19.26.3	Rectangular manhole 120x90 cm with circular cover 560 mm dia of grade HD - 20	each	2528.50
19.26.4	Circular manhole 140 cm dia with circular cover 600 mm dia of grade EHD - 35	each	217.00
19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :		
19.27.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4043.10
19.28	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand ) with precast R.C.C. vertical grating complete as per standard design :		
19.28.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4384.50
19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		
19.29.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	7522.15
19.30	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 coarse sand (Zone III) : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:		
19.30.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :		
19.30.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	4777.35
19.30.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :		
19.30.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	5466.70

Code No.	Description	Unit	Rate ₹
19.30.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :		
19.30.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	6350.45
19.31	Extra for depth beyond 45 cm of brick masonry chamber :		
19.31.1	For 455x610 mm size		
19.31.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	3979.10
19.31.2	For 500x700 mm size		
19.31.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	4340.70
19.31.3	For 600x850 mm size		
19.31.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	5054.50
19.32	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.		
19.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	each	20681.55
19.33	Constructing soak pit 1.20x1.20x1.20 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	2116.40
19.34	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
19.34.1	100 mm dia	each	294.55
19.34.2	150 mm dia	each	400.15
19.35	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete		
19.35.1	450 mm dia RCC pipes.	metre	1936.00
19.35.2	600 mm dia RCC pipes.	metre	2517.85
19.35.3	900 mm dia RCC pipes.	metre	3964.45
19.35.4	1000 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	4905.35
19.35.5	1200 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	6457.85
19.35.6	1800 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	11830.30



<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
19.36	Providing and laying Non Pressure NP-4 class (Heavy duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete		
19.36.1	450 mm dia RCC pipes.	metre	2211.25
19.36.2	600 mm dia RCC pipes.	metre	2883.70
19.36.3	900 mm dia RCC pipes.	metre	5525.50
19.36.4	1000 mm dia RCC pipes.(Laying by manual/ machanical means)	metre	6856.65
19.36.5	1200 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	8165.25
19.36.6	1800 mm dia RCC pipes. (Laying by manual/ machanical means)	metre	16648.75

**SUB HEAD : 20.0**

**PILE WORK**

**BASIC RATES (SH: 20.0 PILE WORK)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0015	Hire and running charges of Tripod and Mechanical Winch machine complete with power unit and accessories	day	2000.00
0017	Hire and running charges of tipper	day	1800.00
0018	Hire and running charges of loader	day	6000.00
0024	Hire and running charges of hydraulic piling rig with power unit etc. including complete accessories and shifting at site	day	34000.00
0025	Hire and running charges of light crane	day	2500.00
0026	Hire and running charges of bentonite pump	day	4200.00
0027	Hire and running charges of vibrating pile driving hammer complete with power unit and accessories	day	35000.00
0028	Hire and running charges of crane 20 tonne capacity	day	9300.00
0080	Hire and running charges of of drill machine up to 400 mm dia ( including cost of mobile oil, diesel consumption in ordinary soil and operator)	day	7500.00
0081	Pile Integrity testing equipment	day	3000.00
0114	Beldar	day	368.00
0130	Mistry	day	487.00
0160	Technician	day	775.00
0161	Helper (Technician)	day	368.00
7181	C.I. pile shoe of 80 kg per pile	kilogram	50.00
7182	M.S. clamps for pile shoe of 35 kg per pile	kilogram	45.00
7183	Bentonite	tonne	3100.00
7246	Vertical load testing (initial) of piles in accordance with IS : 2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification and up to 50 tonne capacity pile	per test	33200.00
7247	Vertical load testing (initial) of piles in accordance with IS : 2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & above 50 tonne and up to 100 tonne	per test	40300.00
7248	Vertical load testing (initial) of piles in accordance with IS : 2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & group of two or more up to 50 tonne	per test	48500.00

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7249	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part-IV) including preparation of pile head etc. for Single pile up to 50 tonne capacity	per test	15000.00
7250	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part-IV) including preparation of pile head etc. for Single pile above 50 tonne capacity pile and up to 100 tonne capacity pile	per test	23000.00
7251	Cyclic vertical load testing of piles in accordance with IS : 2911 (Part- IV) including preparation of pile head etc. for Group of two piles up to 50 tonne capacity each	per test	29500.00
7252	Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile up to 50 tonne capacity	per test	15000.00
7253	Lateral load testing of single pile in accordance with IS : 2911 part -IV for determining safe allowable lateral load on pile above 50 tonne capacity	per test	23600.00
9977	Carriage	L.S.	1.73
9999	Sundries	L.S.	1.73

## 20.0 PILE WORK

Code No.	Description	Unit	Rate ₹
20.1	Providing, driving <b>with hydraulic piling rigs with power units</b> and installing driven cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of shoe and the length of pile to be embedded in the pile cap etc. all complete. (Length of pile for payment shall be measured from top of shoe to the bottom of pile cap) :		
20.1.1	400 mm dia piles	metre	1949.70
20.1.2	450 mm dia piles	metre	2389.70
20.1.3	500 mm dia piles	metre	2880.60
20.1.4	550 mm dia piles	metre	3130.60
20.1.5	750 mm dia piles	metre	5313.10
20.1.6	1000 mm dia piles	metre	8771.25
20.1.7	1200 mm dia piles	metre	11352.00
20.1.8	1500 mm dia piles	metre	16017.80
20.2	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below the pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by percussion drilling using Direct mud circulation (DMC) or Bailer and chisel technique by tripod and mechanical Winch Machine all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap). <b>Note:</b> Truck Mounted rotary/TMR/Tubewell boring machine shall not be used.		
20.2.1	450 mm dia piles	metre	1496.45
20.2.2	500 mm dia piles	metre	1757.85
20.2.3	600 mm dia piles	metre	2391.45
20.2.4	750 mm dia piles	metre	3693.20
20.2A	Boring, providing and installation bored cast-in-situ reinforced cement concrete piles of grade M-25 of specified diameter and length below pile cap, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. by Crawler mounted, telescopic boom hydraulic piling Rig all complete, including removal of excavated earth with all its lifts and leads (length of pile for payment shall be measured up to bottom of pile cap).		

Code No.	Description	Unit	Rate ₹
	<b>Note:</b> Truck Mounted rotary/TMR/Tube well boring machine shall not be used.		
	20.2A.1 600 mm dia piles	metre	3698.15
	20.2A.2 750 mm dia piles	metre	5319.30
	20.2A.3 1000 mm dia piles	metre	8872.40
	20.2A.4 1200 mm dia piles	metre	11597.55
	20.2A.5 1500 mm dia piles	metre	16640.70
20.3	<b>Boring with hydraulic piling rigs with power units</b> , Providing and installing cast in situ single under reamed piles of specified diameter and length below pile cap in M-25 cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with bentonite solution and the length of the pile to be embedded in pile cap etc. all complete. (Length of pile for payment shall be measured upto to the bottom of pile cap) :		
	20.3.1 300 mm dia piles	metre	2143.05
	20.3.2 400 mm dia piles	metre	2601.30
	20.3.3 450 mm dia piles	metre	2875.10
	20.3.4 550 mm dia piles	metre	3199.85
20.4	<b>Extra over single under ream for providing additional bulbs in under reamed piles ,under specified diameter. (only the nos. of extra bulbs are to be paid)</b>		
	20.4.1 300 mm dia piles	each	1529.90
	20.4.2 400 mm dia piles	each	1734.10
	20.4.3 450 mm dia piles	each	1857.35
	20.4.4 550 mm dia piles	each	2048.70
20.5	Providing, driving ( <b>with vibrating pile driving hammer complete with power units &amp; accessories</b> ) and installing driven Pre-cast reinforced cement concrete piles of specified diameter and length below the pile cap in M-25 cement concrete to carry safe working load not less than specified with a central through preformed hole with M.S. black pipe of dia, 40 mm for grouting with cement sand grouting of mix 1:2 (1cement : 2 coarse sand) under sufficient positive pressure to ensure complete filling including centring, shuttering, driving and removing the steel casing pipe and lifting casing etc. complete but excluding the cost of steel reinforcement. (Length of pile for payment shall be measured from top of the shoe to the bottom of pile cap).		
	20.5.1 400 mm dia piles	metre	2529.65
	20.5.2 450 mm dia piles	metre	3065.05
	20.5.3 500 mm dia piles	metre	3251.85
	20.5.4 550 mm dia piles	metre	3672.95
	20.5.5 750 mm dia piles	metre	6801.70
	20.5.6 1000 mm dia piles	metre	9261.85

Code No.	Description	Unit	Rate ₹
20.6	Vertical load testing of piles in accordance with IS 2911 (Part IV) including installation of loading platform by Kentledge/Anchor piles method and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per specification & the direction of Engineer in-charge.  <b>Note:</b> 1. Initial and Routine Load Test shall not be carried out by Dynamic method of testing.  <b>Note:</b> 2. Testing agency shall submit the design of loading platform for the approval of Engineer-in-charge.		
20.6.1	Single pile upto 50 tonne Safe capacity		
20.6.1.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	38561.80
20.6.1.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	17422.50
20.6.2	Single pile above 50 tonne and upto 100 tonne Safe capacity		
20.6.2.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	46808.45
20.6.2.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	26714.50
20.6.3	Group of two or more piles upto 50 tonne Safe capacity		
20.6.3.1	Initial test (Test Load 2.5 times the Safe capacity)	per test	56332.75
20.6.3.2	Routine test (Test Load 1.5 times the Safe capacity)	per test	34264.25
20.7	Cyclic vertical load testing of pile in accordance with IS Code of practice IS: 2911 (part IV) by Kentledge method including preparation of pile head etc for.		
20.7.1	Single pile		
20.7.1.1	Upto 50 tonne Safe capacity pile	per test	17422.50
20.7.1.2	Above 50 tonne and upto 100 tonne Safe capacity pile	per test	26714.50
20.7.2	Group of two or more piles		
20.7.2.1	Upto 400 tonne Safe capacity of group	per test	34264.25
20.8	Lateral load testing of single pile in accordance with IS Code of practice IS : 2911 (Part IV) for determining safe allowable lateral load on pile :		
20.8.1	Upto 50 tonne capacity pile	per test	17422.50
20.8.2	Above 50 tonne and upto 100 tonne capacity pile	per test	27411.40

Code No.	Description	Unit	Rate ₹
20.9	<p data-bbox="287 302 1069 492">Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust &amp; chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test &amp; submission of results, all complete as per direction of Engineer-in-charge.</p> <p data-bbox="287 504 1069 631"><b>Note :-</b> The inclusion of the above item in the schedule of work shall be judiciously decided by the technical sanctioning authority, keeping in view the quality control, type of soil strata &amp; importance of the project.</p>	per test	750.95



**SUB HEAD : 21.0**

**ALUMINIUM WORK**

## BASIC RATES (SH: 21.0 ALUMINIUM WORK)

Code No.	Description	Unit	Rate ₹
0100	Bandhani	day	407.00
0111	Carpenter 1st class	day	487.00
0112	Carpenter 2nd class	day	448.00
0114	Beldar	day	368.00
0116	Fitter (grade 1)	day	487.00
0119	Glazier	day	448.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0139	Skilled Beldar (for floor rubbing etc.)	day	407.00
0589	Chromium plated Brass screws 20 mm	100 Nos	170.00
0689	Anodised Aluminium butt hinges 100x75x4 mm	10 Nos	400.00
0992	Galvanised steel plain sheets	quintal	5600.00
2406	Float glass sheet of nominal thickness 4 mm (weight not less than 10 kg/sqm)	sqm	286.00
2407	Float glass sheet of nominal thickness 5.5 mm (weight not less than 13.50 kg/sqm)	sqm	490.00
2408	Float glass sheet of nominal thickness 8 mm (weight not less than 20.00 kg/sqm)	sqm	605.00
2704	Aluminium Strip 40 mm wide and 2 mm thick	kg	225.00
7001	Brass 100mm mortice latch and lock with 6 levers without pair of handles	each	220.00
7019	Dash fastener/chemical fastener	each	15.00
7048	Rawl plug 50 mm (designation 10 nos)	each	10.00
7306	Aluminium T or L sections	kg	200.00
7313	Expandable fastener with plastic sleeve and MS screws. 32 mm long	each	11.00
7347	Cadmium plated full threaded steel screws (30x4 mm dia)	100 Nos	28.00
7348	Aluminium washer 2 mm thick 15 mm dia	100 Nos	10.00
7388	Dash hold fastener 12.5 mm dia, 50 mm long with 6 mm dia bolt	each	12.00
7389	Anodising 15 microns on aluminium sections	kg	40.00
7390	EPDM Gasket for uPVC window/door	metre	20.00
7391	Anodising 25 microns on aluminium sections	kg	50.00
7392	Powder coating 50 microns on aluminium sections	kg	64.00
7393	Polyester powder coating 50 microns on aluminium sections	kg	70.00
7394	Double action hydraulic floor spring with stainless steel cover plate	each	1550.00
7395	6 mm dia G.I. adjustable hangers including clips (up to 1.2 m length)	each	20.00
7396	Double action hydraulic floor spring with brass cover plate	each	1700.00

Code No.	Description	Unit	Rate ₹
7477	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade) 12 mm thick	sqm	563.00
7480	Prelaminated particle board with both sides decorative lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade) 12 mm thick	sqm	596.00
8646	Silicon sealant	cartridge	100.00
8647	Stainless steel screws 30 x 4 mm	100 Nos	32.00
8648	Hermetically sealed double glazed unit made with 6 mm thick clear float glass both side having 12 mm air gap	sqm	2108.00
8649	Stainless steel (SS 304 grade) adjustable friction window stay 205 x 19 mm	each	169.00
8650	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19 mm	each	219.00
8651	Stainless steel (SS 304 grade) adjustable friction window stay 355 x 19 mm	each	191.00
8652	Stainless steel (SS 304 grade) adjustable friction window stay 510 x 19 mm	each	515.00
8653	Stainless steel (SS 304 grade) adjustable friction window stay 710 x 19 mm	each	889.00
8654	Masking tape	metre	2.30
8660	Aluminium casement window fastener (Anodised AC 15)	each	40.00
8661	Aluminium casement window fastener (powder coated )	each	43.00
8662	Aluminium casement window fastener (polyester powder coated)	each	42.00
8663	Aluminium round shape handle (anodised AC 15) outer dia 100mm	each	49.00
8664	Aluminium round shape handle (powder coated) outer dia 100 mm	each	54.00
8665	Aluminium round shape handle (polyester powder coated) outer dia 100 mm	each	59.00
8666	Stainless steel screws 25 x 4 mm	100 Nos	35.00
8774	Aluminium Grill	kg	250.00
8776	Stainless steel dash fastener of 8 mm dia and 75 mm long bolt	each	14.00
8778	Toughened glass 12 mm thickness	sqm	1747.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 21.0 ALUMINIUM WORK

Code No.	Description	Unit	Rate ₹
21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :		
21.1.1	For fixed portion		
21.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	355.20
21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	384.50
21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	391.80
21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)		
21.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	415.05
21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	444.90
21.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	452.40
21.2	Providing and fixing 12 mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of Engineer-in-charge.		
21.2.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side	sqm	826.35
21.2.2	Pre-laminated particle board with decorative lamination on both sides	sqm	866.60

Code No.	Description	Unit	Rate ₹
21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item):		
21.3.1	With float glass panes of 4.0 mm thickness	sqm	741.50
21.3.2	With float glass panes of 5.50 mm thickness	sqm	1003.95
21.3.3	With float glass panes of 8 mm thickness	sqm	1153.90
21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.		
21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	each	2054.40
21.4.2	With brass cover plate minimum 1.25 mm thickness	each	2228.60
21.5	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with stainless steel rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in-charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).	kg	478.85
21.6	Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length), fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60 mm long and stainless steel expandable dash fastener of 12.5 mm dia and 50 mm long, complete as per direction of Engineer-in-charge.	each	55.20
21.7	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving dash fastener, over expansion joints on vertical surfaces/ceiling floors, the fixing on plate in one row on one side of joint only shall be done with stainless steel dash fasteners of 8 mm dia and 75 mm long bolt including providing aluminium washers 2 mm thick & 15 mm dia , at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete as per direction of Engineer-in-charge.		

Code No.	Description	Unit	Rate ₹
21.7.1	Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	455.85
21.7.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	485.15
21.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.		
21.8.1	Upto 5mm depth and 5 mm width	metre	62.45
21.9	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		
21.9.1	For fixed portion	kg	11.60
21.9.2	For shutters of doors, windows & ventilators	kg	11.60
21.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	sqm	3176.20
21.11	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.		
21.11.1	205 X 19 mm	each	211.60
21.11.2	255 X 19 mm	each	269.65
21.11.3	355 X 19 mm	each	237.15
21.11.4	510 X 19 mm	each	613.45
21.11.5	710 X 19 mm	each	1047.85
21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.		
21.12.1	Anodized (AC 15 ) aluminium tubular handle bar	each	463.75
21.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar	each	509.30
21.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	520.70
21.13	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	359.00

Code No.	Description	Unit	Rate ₹
21.14	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS: 1285, fixed with dash fastener of required dia and size (Dash fastener to be paid for separately).	kg	315.10
21.15	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
21.15.1	Anodized (AC 15) aluminium	each	52.00
21.15.2	Powder coated minimum thickness 50 micron aluminium	each	55.50
21.15.3	Polyester powder coated minimum thickness 50 micron aluminium	each	54.35
21.16	Providing and fixing aluminium round shape handle of outer dia 100 mm with SS screws etc. complete as per direction of Engineer-in-charge		
21.16.1	Anodized (AC 15 ) aluminium	each	62.50
21.16.2	Powder coated minimum thickness 50 micron aluminium	each	68.30
21.16.3	Polyester powder coated minimum thickness 50 micron aluminium	each	74.10
21.17	Providing and fixing anodised aluminium grill (anodised transparent or dyed to required shade according to IS: 1868 with minimum anodic coating of grade AC 15) of approved design/pattern, with approved standard section and fixed to the existing window frame with C.P. brass/ stainless steel screws @ 200 mm centre to centre, including cutting the grill to proper opening size for fixing and operation of handles and fixing approved anodised aluminium standard section around the opening, all complete as per requirement and direction of Engineer-in-charge. (Only weight of grill to be measured for payment).	kg	408.85
21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	sqm	4608.85
21.19	<b>Filling the gap in between aluminium/ stone/ wood frame and adjacent RCC/ Brick/ Stone/ wood/ Ceramic/ Gypsum work by providing weather/structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete, complying to ASTM C920, DIN 18540-F &amp; ISO 11600</b>		
21.19.1	<b>Upto 5 mm depth and 5 mm width</b>	<b>metre</b>	<b>96.65</b>
21.19.2	<b>Upto 10 mm depth and 10 mm width</b>	<b>metre</b>	<b>133.20</b>
21.19.3	<b>Upto 20 mm depth and 20 mm width</b>	<b>metre</b>	<b>245.85</b>

**SUB HEAD : 22.0**

**WATER PROOFING**



## BASIC RATES (SH : 22.0 WATER PROOFING)

Code No.	Description	Unit	Rate ₹
0002	Hire charges of Concrete Mixer 0.25 to 0.40 cum with Hopper	day	800.00
0012	Vibrator (needle type 40 mm)	day	350.00
0101	Bhisti	day	407.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0125	Mason (for plain stone work) 2nd class	day	448.00
0128	Mate	day	407.00
0130	Mistry	day	487.00
0131	Painter	day	448.00
0155	Mason (average)	day	467.00
0159	Skilled torch operator for laying tack	day	487.00
0285	Brick Aggregate (single size) : 63 mm nominal size	cum	750.00
0295	Stone Aggregate (single size) : 20 mm nominal size	cum	1300.00
0296	Stone Aggregate (single size) : 12.5 mm nominal size	cum	1300.00
0297	Stone Aggregate (single size) : 10 mm nominal size	cum	1300.00
0313	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	34561.00
0316	Bitumen solution primer of approved quality	litre	50.00
0318	Bitumen felt fibre base (vegetable or animal):As per IS 7193 Grade I	sqm	70.00
0319	Bitumen felt as per IS 7193 Grade-II	sqm	80.00
0322	Bitumen felt :Type 3 Grade I	sqm	70.00
0367	Portland Cement (OPC-43 Grade)	tonne	5700.00
0370	Coal (steam)	quintal	400.00
0982	Coarse sand (zone III)	cum	1200.00
1169	Kota stone slab 25mm thick (rough chiseled)	sqm	280.00
1177	Stone grit 6 mm and down size or pea sized gravel	cum	795.00
1213	Water proofing materials	kg	35.00
1241	Commercial LPG in cylinder	kg	65.00
2200	Carriage of Steam coal	tonne	118.59
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	103.77

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
2203	Carriage of coarse sand	cum	103.77
2209	Carriage of cement	tonne	92.24
2211	Carriage of Tar / Bitumen	tonne	103.77
2216	Carriage of stone blocks white & red sand stone & kota stone slab	tonne	92.24
2260	Carriage of brick aggregate	cum	112.79
3002	Polyvinyl chloride sheet 400 micron thick	sqm	40.00
7233	Fibre glass tissue reinforcement Type II Grade i	sqm	86.00
7427	Water stops serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	211.00
7428	Water stops dumb bell with central bulb	metre	165.00
7429	Kickers	metre	195.00
8200	A.P.P. modified polymeric felt (two layers) 1.5 mm thick	sqm	75.00
8201	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	98.00
8203	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	100.00
8204	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt	sqm	200.00
8205	A.P.P. modified 3 mm thick membrane reinforced with polyester matt	sqm	205.00
8206	Bitumen primer for bitumen membrane	litre	90.00
8207	Geotextile 120 grams per sqm membrane	sqm	45.00
8501	Polymer modified cementation coating	kg	140.00
8502	Fibre glass cloth	sqm	44.00
9977	Carriage	L.S.	1.73
9999	Sundries	L.S.	1.73

## 22.0 WATER PROOFING

Code No.	Description	Unit	Rate ₹
22.1	<p>Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of :</p> <p>(i) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound.</p> <p>(ii) 2nd layer of 25 mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions.</p> <p>(iii) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8 cu dm/sqm thoroughly embedded in the 2nd layer.</p>		
22.1.1	Using rough kota stone.	sqm	1017.55
22.2	<p>Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :</p>		
22.2.1	Using rough Kota stone	sqm	1253.30
22.3	<p>Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of:</p> <p>(i) 1st course of applying cement slurry @ 4.4 kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.</p> <p>(ii) 2nd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.</p> <p>(iii) 3rd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area.</p> <p>(iv) 4th course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 kg/ sqm).</p>		
		sqm	505.90

Code No.	Description	Unit	Rate ₹
22.4	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :		
22.4.1	Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	254.15
22.4.2	Dumb bell with central bulb (180 mm wide, 8 mm thick)	metre	200.70
22.4.3	Kickers (320 mm wide, 5 mm thick)	metre	235.55
22.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying :		
	(a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours.		
	(b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	sqm	298.30
22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:		
	(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.		
	(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.		
	(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.		
	(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately.For the purpose of measurement the entire treated surface will be measured.	sqm	395.00
22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations:		
	(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.		
	(b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed		

Code No.	Description	Unit	Rate ₹
	with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.		
	(c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.		
	(d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep.		
	(e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		
	22.7.1 With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	sqm	1034.65
22.8	Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 6 mm and down size or peasized gravel spread at 6 cubic decimeter per square metre, including preparation of surface but excluding grading complete with :		
	22.8.1 Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322	sqm	312.00
22.9	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) ,sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.	sqm	493.40
22.10	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6 mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.	sqm	548.55

Code No.	Description	Unit	Rate ₹
22.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic decimeter per sqm including preparation of surface but excluding grading, complete.	sqm	548.75
22.12	Supplying and applying bituminous solution primer on roof and / or wall surface at 0.24 litre per sqm.	sqm	33.05
22.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6 mm down size or pea sized gravel :		
22.13.1	at 6 cudm per sqm	sqm	11.95
22.13.2	at 8 cudm per sqm	sqm	15.10
22.14	Grading roof for water proofing treatment with		
22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5583.80
22.14.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	9280.65
22.14.3	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	8404.25
22.15	Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5 mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	459.65
22.16	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/ sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	321.50

Code No.	Description	Unit	Rate ₹
22.17	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric memberane over roof consisting of first coat of bitumen primer @ 0.40 Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0 mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 10 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 ( 1 cement : 3 fine sand) and finished neat (item of laying brick tiles shall be paid for separately).	sqm	518.40
22.18	Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2 mm thick water proofing membrance, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrance manufacture of density at 25°C, 0.87 - 0.89 kg/ litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.		
	22.18.1 2mm (for corrugated roof sheets)	sqm	282.95
22.19	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
	22.19.1 3 mm thick	sqm	410.70

Code No.	Description	Unit	Rate ₹
22.20	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25 °C, 0.87-0.89 kg/litre and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc, and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23 °C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150 °C. Cold flexibility shall be upto -2 °C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
22.20.1	3 mm thick	sqm	417.10
22.21	Extra for covering top of membrane with Geotextile, 120 gsm non woven, 100% polyester of thickness 1 to 1.25 mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation.	sqm	76.65
22.22	<b>Providing and mixing integral crystalline admixture for waterproofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage &amp; water treatment plant, tunnels / subway and bridge deck etc. at the time of transporting of concrete into the drum of the ready-mix truck, using integral crystalline admixture @0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.</b>	kg	376.40
22.22A	Providing and applying fibre reinforced elastomeric liquid water proofing membrane with resilient acrylic polymers having Sun Reflectivity Index (SRI) of 105 on top of concrete roof in three coats @10.76 litre/ 10 sqm. One coat of self-priming of elastomeric waterproofing liquid (dilution with water in the ratio of 3:1) and two coats of undiluted elastomeric waterproofing liquid (dry film thickness of complete application/ system not less than 500 microns). The operation shall be carried out after scrapping and properly cleaning the surface to remove loose particles with wire brushes, complete in all respect as per the direction of Engineer-in-Charge.	sqm	327.55



Code No.	Description	Unit	Rate ₹
22.23	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels/ subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guaranteed for 10 years against any leakage.		
22.23.1	For vertical surface two coats @0.70 kg per sqm per coat	sqm.	468.10
22.23.2	For horizontal surface one coat @1.10 kg per sqm.	sqm.	362.35
22.23A	Providing & Applying polymer modified, flexible cementitious negative side waterproofing coating with elastic waterproofing polymers on interior wall plaster surface in three coats @14.35 kg /10 sqm. one coat of self priming of cementitious waterproofing polymer(dilution with water in the ratio of 1:1) and two coats of cementitious waterproofing polymer (dilution with water in the ratio of 3:1 ) after scrapping and properly cleaning the surface to remove pre-existing paint film & loose particles till plaster is visible, complete in all respect as per the direction of Engineer-in-Charge.	sqm	368.20
22.24	Providing and applying integral crystalline dry shake of hydrophilic in nature for waterproofing treatment to the RCC structures like basement raft, foundation slab, sewage & water treatment plant slab, warehouses floor, parking structures and water tank base slab etc. sprinkled @ 0.60kg per sqm or higher as recommended by the manufacturer's specification over the lean concrete of above cited structures. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 85%, compared control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline dry-shake shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.	sqm.	316.15

Code No.	Description	Unit	Rate ₹
22.24A	Providing & Applying high quality acrylic modified resin based texture of Dholpur/Red sand stone Pattern with anti algae and UV resistance properties to be applied as intermediate finish in desired pattern @ 43.04 kgs/10 sqm to form film of 1-1.5 mm thickness after scrapping and properly cleaning the surface to remove loose particles from the plaster surface, followed by top coating with Premium Acrylic Smooth exterior paint with Silicone additives of required shade by two or more coats @ 1.43 litres/10 sqm, complete as the direction of Engineer -in-Charge.	sqm	391.80
22.25	Providing and applying crystalline mortar by mixing in the ratio of 4.5 : 1 (4.5 parts crystalline mortar : 1 part water) for the treatment of faulty construction joints, cracks, tie rod holes and spalled & honeycombed surface of RCC underground structures like basement, water tanks, bridge deck etc. to ensure water tightness. The crystalline mortar shall conform to the EN 1504-3 having compressive strength Class R4 $\geq$ 45 MPa and adhesive bond strength Class R3 $\geq$ 1.5 MPa. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.		
22.25.1	For sealing cracks and faulty construction joints, by preparing the surface, making U-shape groove size of 25x25mm and then priming the surface with integral crystalline slurry @0.05kg per running meter and while the surface is tacky then filling the groove upto top edge with crystalline mortar @1.50kg per running meter. Once crystalline mortar is touch dry then finally applying two coats of integral crystalline slurry @0.05kg per running meter per coat on treated surface.	metre	514.00
22.25.2	For patching of tie rod holes, preparing tie rod hole surface and then priming the area with integral crystalline slurry @0.070kg per sqm and while the surface is tacky, repairing and then filling the tie rod holes with crystalline mortar @0.040kg per hole. The crystalline mortar shall be tightly rodded into tie rod holes or packed tightly (For 25x25x25 mm tie rod hole, use 0.040 kg to fill the hole)	each hole	18.45
22.26	Providing and applying of swellable type water stop tape, 19mm x 25mm thick in linear meter (expansive nature) for construction joints treatment of RCC structure, such as raft slab, retaining walls, water storage tank and at the junctions of raft slab with the retaining walls etc.. After cleaning the surface, one coat of required primer for swellable water stop tape shall be applied throughout the length of the joint @3.78 litre per 240 running meter. Over the primed surface swellable type water stop tape shall be placed. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. The product performance shall carry guaranteed for 10 years against any leakage.	metre	538.90

**SUB HEAD : 23.0**

**RAIN WATER HARVESTING &  
TUBEWELLS**

**BASIC RATES (SH: 23.0 RAIN WATER HARVESTING & TUBEWELLS)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0005	Hire charges of Diesel Truck - 9 tonne	day	2000.00
0020	Hydraulic Excavator (3D) with driver and fuel	day	6500.00
0040	Air compressor 250 cfm with two leads for pneumatic cutters / hammers	day	1500.00
0103	Blacksmith 2nd class	day	448.00
0113	Chowkidar	day	368.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0123	Mason (Brick layer ) first class	day	487.00
0124	Mason (Brick layer ) 2nd class	day	448.00
0130	Mistry	day	487.00
0134	Rock Hole Driller	day	368.00
1235	Diesel	litre	46.55
2321	Carriage of Spun iron S & S pipes 150 mm dia	100 metre	378.03
2322	Carriage of Spun iron S & S pipes 200 mm dia	100 metre	614.93
2343	Carriage of Ductile Iron pipes (k7) 100 mm dia	100 metre	226.82
2344	Carriage of Cast iron pipes 150 mm dia	100 metre	378.03
2345	Carriage of Cast iron pipes 200 mm dia	100 metre	614.93
7743	M.S. pipe 150 mm dia casing pipe	metre	450.00
7744	M.S. pipe 200 mm dia casing pipe	metre	1200.00
7745	PVC blind pipe 150 mm dia as per IS: 12818	metre	487.00
7746	PVC blind pipe 200 mm dia as per IS: 12818	metre	519.00
7747	M.S. cap 150 mm dia	each	150.00
7748	M.S. cap 200 mm dia	each	190.00
7749	M.S bail plug 150 mm dia	each	190.00
7750	M.S bail plug 200 mm dia	each	210.00
7751	PVC slotted pipe 150 mm dia as per IS: 12818	metre	450.00
7752	PVC slotted pipe 200 mm dia as per IS: 12818	metre	700.00
7753	Boulder 50 mm to 200 mm	cum	700.00
7754	Gravel 5 mm to 10 mm	cum	800.00
7755	Gravel 1.5 mm to 2 mm	cum	800.00

*SUB HEAD : 23.0 RAIN WATER HARVESTING & TUBEWELLS*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7756	Gravel 3 mm to 6 mm	cum	800.00
7757	M.S. pipe 100 mm dia casing pipe	metre	700.00
7758	uPVC blind pipe 100 mm dia as per IS: 12818	metre	244.00
7759	uPVC slotted pipe 100 mm dia as per IS: 12818	metre	380.00
7760	M.S. cap 100 mm dia	each	120.00
7761	M.S. bail plug 100 mm dia	each	150.00
7762	Precast R.C.C. perforated slab	each	800.00
7763	Water supply by tanker of 5000 litre capacity	each	750.00
7764	M.S. socket 100 mm dia	each	120.00
7765	M.S. socket 150 mm dia	each	210.00
7766	M.S. socket 200 mm dia	each	270.00
7772	Pea Gravel	cum	900.00
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 23.0 RAIN WATER HARVESTING & TUBEWELLS

Code No.	Description	Unit	Rate ₹
23.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.		
23.1.1	All types of soil		
23.1.1.1	300 mm dia	metre	370.70
23.1.1.2	350 mm dia	metre	405.45
23.1.1.3	400 mm dia	metre	518.95
23.1.2	Rocky strata including Boulders		
23.1.2.1	300 mm dia	metre	855.10
23.1.2.2	350 mm dia	metre	895.25
23.1.2.3	400 mm dia	metre	1034.50
23.2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.		
23.2.1	All types of soil		
23.2.1.1	300 mm dia	metre	432.45
23.2.1.2	350 mm dia	metre	480.50
23.2.1.3	400 mm dia	metre	648.70
23.2.2	Rocky strata including Boulders		
23.2.2.1	300 mm dia	metre	927.10
23.2.2.2	350 mm dia	metre	962.20
23.2.2.3	400 mm dia	metre	1218.55
23.3	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.		
23.3.1	100 mm nominal size dia	metre	289.85
23.3.2	150 mm nominal size dia	metre	572.30
23.3.3	200 mm nominal size dia	metre	610.65

*SUB HEAD : 23.0 RAIN WATER HARVESTING & TUBEWELLS*

Code No.	Description	Unit	Rate ₹
23.4	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.		
23.4.1	100 mm nominal size dia	metre	448.05
23.4.2	150 mm nominal size dia	metre	529.35
23.4.3	200 mm nominal size dia	metre	821.15
23.5	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	921.90
23.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	1038.05
23.7	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer -in-charge.	cum	1038.05
23.8	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	cum	1175.60
23.9	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.	each	959.35
23.10	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.		
23.10.1	100 mm nominal size dia having minimum wall thickness 5.00 mm	metre	890.10
23.10.2	150 mm nominal size dia having minimum wall thickness 5.00 mm	metre	1210.60
23.10.3	200 mm nominal size dia having minimum wall thickness 5.40 mm	metre	1525.90

**SUB HEAD : 23.0 RAIN WATER HARVESTING & TUBEWELLS**

Code No.	Description	Unit	Rate ₹
23.11	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer -in-charge.		
23.11.1	100 mm nominal size dia	metre	950.75
23.11.2	150 mm nominal size dia	metre	1291.50
23.11.3	200 mm nominal size dia	metre	1607.50
23.12	Development of tube well in accordance with IS : 2800 (part I) and IS: 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	hour	542.20
23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:		
23.13.1	100 mm dia	each	146.35
23.13.2	150 mm dia	each	182.95
23.13.3	200 mm dia	each	231.75
23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.		
23.14.1	100 mm clamp	each	962.05
23.14.2	150 mm clamp	each	1017.70
23.14.3	200 mm clamp	each	1154.45
23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).		
23.15.1	100 mm dia	each	184.30
23.15.2	150 mm dia	each	230.75
23.15.3	200 mm dia	each	253.95

**SUB HEAD : 23.0 RAIN WATER HARVESTING & TUBEWELLS**



**SUB HEAD : 24.0**

**CONSERVATION  
OF  
HERITAGE BUILDINGS**

**BASIC RATES (SH: 24.0 CONSERVATION OF HERITAGE BUILDINGS)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0101	Bhisti	day	407.00
0103	Blacksmith 2nd class	day	448.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0124	Mason (Brick layer) 2 nd class	day	448.00
0128	Mate	day	407.00
0131	Painter	day	448.00
0155	Mason (average)	day	467.00
0159	Skilled torch operator for laying tack	day	487.00
0773	Unslaked lime	quintal	270.00
1034	Bolts and nuts up to 300 mm in length	quintal	5100.00
1182	Surki	cum	700.00
2205	Carriage of Steel	tonne	92.24
4009	Mild steel tubes hot finished welded type	kg	42.00
6501	Sand zone V (Jamuna)	cum	600.00
7346	Double coupler	each	48.00
7387	Spigot for standard jointing	kg	45.00
7397	Base Jack	each	150.00
7398	Challies	each	800.00
7399	Cup locks	each	50.00
7767	Stone cleaning chemical approved by ASI	litre	165.00
7768	Water repellent chemical approved by ASI	litre	650.00
7769	Stone surface strengthening chemical approved by ASI	litre	1020.00
7770	Turpentine oil	litre	55.00
7771	Liquid Amonia 5%	litre	161.00
7775	Sodium pentachlorophenate	kg	630.00
9999	Sundries	L.S.	1.73

## 24.0 CONSERVATION OF HERITAGE BUILDINGS

Code No.	Description	Unit	Rate ₹
24.1	Raking out joints of stone masonry surface to the required width and depth, with due care and precaution, by mechanical / manual means, including preparing and cleaning the surface for re-pointing/ refilling of joints, including disposal of rubbish to the dumping ground within 50 metre lead.	sqm	29.65
24.2	Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube chalis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge.  <b>Note:-</b> (1) The elevational area of the scaffolding shall be measured for payment purpose.(2) The payment will be made once only for execution of all items for such works.	sqm	160.10
24.3	Cleaning the sand stone surface and removing dirt, dust, bird dropping, grease, oil, algae, fungus, monkey beats, vegetable growth etc., including providing, applying and washing the surface with liquid Ammonia Chemical of 5% solution and other chemical cleaning agent as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with the help of required scrubbers and also cleaning with machine operated water jet mixed with desired quantity of fine silica where ever required, without causing any scratching/ damage to the stone surface and finally washing the surface with clean water with the help of pressure jet machine, complete in all respect, including taking all precautions to safeguard ventilators, windows, doors etc. by suitable covering so as to avoid any damage to the building/ structure, all as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	90.70
24.4	Providing and applying antifungal wash treatment using 3% solution of sodium pentachlorophenate, of reputed brand and manufacturer, on cleaned sand stone surface at desired locations as per direction of Engineer-in-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	36.90
24.5	Ruled / Flush pointing on Red sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime: 1.5 surkhi (50% red and 50% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	159.70

SUBHEAD : 24.0 CONSERVATION OF HERITAGE BUILDINGS

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
24.6	Ruled/ Flush pointing on White sand stone masonry surface with lime, surkhi and marble dust mortar in the ratio of 1:1.5:1/2 {One lime : 1.5 surkhi (15% dark red and 85% light yellow surkhi) : 1/2 marble dust}. (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	159.70
24.7	Applying two or more coat of Ethyl Silicate chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacturer, with brush or spray on the existing stone masonry surface till there is no further absorption of chemical by stone surface, including protecting the applied surface from direct sunlight by suitable means during application, all complete as per direction of the Engineer-in-Charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	267.80
24.8	Applying breathable, non-reactive, antifungal, and water repellent Silane/ Siloxane chemical as approved by Archaeological Survey of India/ Engineer-in-charge, of approved brand and manufacture, diluted with solvent mineral Turpentine oil in the ratio of 1:12 (One part of approved chemical :12 Part of Turpentine oil), on the existing sand stone masonry surface with two or more coats to give uniform application of chemical on the surface, all complete as per direction of Engineer-In-charge (The rate is inclusive of all materials & labours involved except scaffolding).	sqm	55.15

**SUB HEAD : 25.0**

**STRUCTURAL GLAZING  
ALUMINIUM COMPOSITE PANEL**

**BASIC RATES (SH: 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
2605	Structural sealant - 6 x 12 mm	metre	30.00
2606	Spacer tape 6.4 mm thick x 6 mm wide	metre	20.00
2607	Weather Sealant - Non Staining (600 ml)	each	420.00
2608	Weather Sealant - Normal (300 ml)	each	125.00
2609	MS Brackets/Aluminium Alloy Brackets	kg	100.00
2610	Silicon Gasket in Kg (Above 50 g / m)	kg	570.00
2611	EPDM Gasket in Kg (Above 60 g / m)	kg	150.00
2612	Anchor Fastner - M10	each	10.00
2613	SS Bolt with washer of different sizes for structural glazing / ACP Cladding	each	35.00
2614	SS Screws of sizes for structural glazing / ACP Cladding	each	4.00
2615	Protective Tape	metre	20.00
2616	GI flashing - 1.2 mm thick	kg	58.00
2617	6 mm thick high performance glass	sqm	1850.00
2618	6 mm thick clear heat strengthened glass	sqm	640.00
2619	6 mm thick clear heat strengthened glass	each	128.00
2620	ARMS GS HD - Top Hung -20"- Type P- Couple	pair	1550.00
2621	Connection Block for vision glass panel	each	39.00
2622	Curtain wall striker for vision glass panel	each	100.00
2623	Adjustable fastening pawl for vision glass panel	each	38.00
2624	Corner drive for vision glass panel	each	295.00
2625	Top wedge block for vision glass panel	each	135.00
2626	Glass wool of density @ 48 Kg / cum with black glass tissue (BGT)	sqm	230.00
2627	SS Screws - # 8 x 19	each	10.00
2628	Weather Sealant - DC 789	cartridge	130.00
2629	Cement Board	sqm	250.00
2630	Baker rod	metre	5.00
2631	4 mm thick ACP	sqm	1000.00
2632	Fire Stop	metre	550.00
2634	GI/Aluminium Sheet (0.8 mm thick)	kg	45.00
7306	Aluminium T or L sections	kg	200.00

*SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
7392	Powder coating 50 microns on aluminium sections	kg	64.00
8654	Masking tape	metre	2.30
8945	4 Point facade glass bracket without flat head bolts	each	3318.00
8946	2 Point facade glass bracket (wall mounted without flat head bolt)	each	1659.00
8947	1 Point facade glass bracket (wall mounted without flat head bolt)	each	1300.00
8948	Flate head bolt for brackets of spider glazing	each	651.00
8949	400 mm long fin plate without fastners	pair	5931.00
9999	Sundries	L.S.	1.73

---

*SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL*

## 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL

Code No.	Description	Unit	Rate ₹
25.1	<p>Providing and supplying aluminium extruded tubular and other aluminium sections as per the architectural drawings and approved shop drawings , the aluminium quality as per grade 6063 T5 or T6 as per BS 1474,including super durable powder coating of 60-80 microns conforming to AAMA 2604 of required colour and shade as approved by the Engineer-in-Charge. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account).</p>	kg	338.25
25.2	<p>Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:</p> <p>(a) Structural analysis &amp; design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation &amp; drainage and protection against fire hazard including:</p> <p>(b) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimentional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/ masonry/structural steel framework of building structure using stainless steel anchor fasteners/ bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.</p> <p>(c) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.</p> <p>(d) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.</p>		

*SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL*



Code No.	Description	Unit	Rate ₹
(e)	<p>Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, T&amp;P, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified. The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer- in-Charge.</p> <p><b>Note:- 1.</b> The cost of providing extruded aluminium frames, shadow boxes, extruded aluminium section capping for fixing in the grooves of the curtain glazing and vermin proof stainless steel wire mesh shall be paid for separately under relevant items under this sub- head. However, for the purpose of payment, only the actual area of structural glazing (including width of grooves ) on the external face shall be measured in sqm. up to two decimal places.</p> <p><b>Note:- 2.</b> The following performance test are to be conducted on structural glazing system if area of structural glazing exceeds 2500 Sqm from the certified laboratories accredited by NABL(National Accreditation Board for Testing and Calibration Laboratories), Department of Science &amp; Technologies, India. Cost of testing is payable separately. The NIT approving authority will decide the necessity of testing on the basis of cost of the work, cost of the test and importance of the work. Performance Testing of Structural glazing system Tests to be conducted in the NBL Certified laboratories</p> <ol style="list-style-type: none"> <li>(1) Performance Laboratory Test for Air Leakage Test (-50pa to - 300pa) &amp; (+50pa to +300pa) as per ASTM E-283-04 testing method for a range of testing limit 1 to 200 mVhr</li> <li>(2) Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range up to 2000 ml.</li> </ol>		

*SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL*

Code No.	Description	Unit	Rate ₹
	(3) Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml		
	(4) Structural Performance Deflection and deformation by static air pressure test (1.5 times desing wind pressure without any failure) as per ASTME-330-10 testing method for a range upto 50 mm		
	(5) Seismic Movement Test (upto 30 mm) as per AAMA 501.4-09 testing method for Qualitative test. Tests to be conducted on site.		
	(6) Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000 ml	sqm	2409.90
25.3	<p>Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12- 6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthened clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor.“(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2)“For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.“</p> <p>(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.</p>	sqm	3730.70
25.4	Extra for openable side / top hung vision glass panels (IGUs) including providing and supplying at site all accessories and hardwares for the openable panels as specified and of the approved make such as heavy duty stainless steel friction hinges, min 4 -point cremone locking sets with stainless steel plates, handles, buffers etc. including necessary stainless steel screws/ fasteners, nuts, bolts, washers etc. all complete as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer- in-Charge.	sqm	2941.60

**SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL**

Code No.	Description	Unit	Rate ₹
25.5	Providing, fabricating and supplying shadow box of required size and shape, for fixing in the spandrel portion of the structural glazing, in linear as well as curvilinear portions of the building by providing semi-rigid, inorganic, non-combustible fibre glass wool insulation 50 mm thick, conforming to IS: 8183 and BS: 3958 Part 5. The insulation layer shall have facing (factory bonded on surface # 1 of the fibre glass insulation layer), of black non-woven fibre glass tissue of nominal thickness 0.5 mm and nominal mass not less than 60 gm / sqm, made of randomly oriented glass fibres distributed in a binder by a wet-lay process including fixing 1.5 mm thick solid aluminum sheet backing using, 6 mm thick cement board including SS rivets, nuts, bolts, washers etc complete.	sqm	1542.60
25.6	Providing and supplying Spandrel Glass Panels comprising of 6 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade so as to match the colour and shade of the IGUs in the vision panels etc. ,all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in-Charge. "For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm. (Payment for fixing of Spandrel Glass Panels in the curtain glazing is included in cost of relevant Item*). (i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m <sup>2</sup> K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	sqm	2798.70
25.7	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including: (a) Structural analysis & design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. (b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades made out of 4mm thick aluminium composite panel material consisting of 3mm thick FR grade mineral core sandwiched between two Aluminium sheets (each 0.5mm thick). The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.		

**SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL**

Code No.	Description	Unit	Rate ₹
	(c) The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material & labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium item.s The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete , as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge. However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places."	sqm	3405.90
25.8	<p>Design supply &amp; installation of suspended Spider Glazing system designed to withstand the wind pressure as per IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS- 316 Grade Stainless steel Spider &amp; bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/ beams by means of SS- 316 Grade stainless steel brackets &amp; Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener &amp; anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion &amp; seismic movements etc. The joints between glass panels (6 to 8 mm) and gaps at the perimeter &amp; in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof &amp; dust proof.</p> <p>The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, T&amp;P, scaffolding, other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener, anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured.</p>	sqm	6928.55

**SUB HEAD : 25.0 STRUCTURAL GLAZING ALUMINIUM COMPOSITE PANEL**

**SUB HEAD : 26.0**

**NEW TECHNOLOGIES AND  
MATERIALS**

**BASIC RATES (SH: 26.0 NEW TECHNOLOGIES AND MATERIALS)**

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0009	Pumping charges of concrete including Hire charges of pump, piping work & accessories etc.	cum	200.00
0011	Hire charges of Pump set of capacity 4000 litres/hour	day	650.00
0012	Vibrator (Needle type 40 mm)	day	350.00
0014	Front end loader capacity 1.00 cum	day	6000.00
0086	Compressor, gun, rubber pipes & other accessories- hire charge of plant & machinery i/c necessary fuel	day	4000.00
0088	Hire charges of Drill machine upto 30 mm dia	day	150.00
0089	Hire charges of sand blasting equipment	day	400.00
0090	Hire charges of compressor	day	600.00
0091	Welding charges of shear key to existing reinforcement	each	2.00
0092	Hire charges of plant and Machinery that can inject 350 kg/day	day	100.00
0100	Bandhani	day	407.00
0101	Bhisti	day	407.00
0102	Blacksmith 1st class	day	487.00
0103	Blacksmith 2nd class	day	448.00
0111	Carpenter 1st class	day	487.00
0112	Carpenter 2nd class	day	448.00
0113	Chowkidar	day	368.00
0114	Beldar	day	368.00
0115	Coolie	day	368.00
0116	Fitter (grade 1)	day	487.00
0117	Assistant Fitter or 2nd class Fitter	day	448.00
0119	Glazier	day	448.00
0122	Mason (for plaster of paris work) 1st class	day	487.00
0123	Mason (brick layer) 1st class	day	487.00
0124	Mason (brick layer) 2nd class	day	448.00
0125	Mason (for plain stone work) 2nd class	day	448.00
0126	Mason (for ornamental stone work) 1st class	day	487.00
0127	Driver (for Road Roller, Concrete Mixer, Truck etc.)	day	487.00
0128	Mate	day	407.00
0129	Sewerman	day	390.00
0130	Mistry	day	487.00
0131	Painter	day	448.00
0132	Rock Excavator	day	368.00
0133	Rock Breaker	day	368.00
0134	Rock Hole Driller	day	368.00
0135	Stone Chiseller	day	407.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
0138	Sprayer (for bitumen, tar etc.)	day	407.00
0139	Skilled Beldar (for floor rubbing etc.)	day	407.00
0141	White Washer	day	407.00
0154	Nozzel man/ gun man	day	487.00
0155	Mason (average)	day	467.00
0156	Carpenter (average)	day	467.00
0157	Operator (Pile/ Special machine)	day	487.00
0159	Skilled torch operator for laying tack	day	487.00
0160	Technician	day	775.00
0161	Helper (Technician)	day	368.00
0164	Security guard without gun (8 hours shift duty per day)	day	407.00
0165	Security guard with gun (8 hours shift duty per day)	day	448.00
0238	6 mm thick heavy duty fiber cement board	sqm	440.00
0239	8mm thick heavy duty fiber cement board	sqm	322.00
0240	9 mm thick heavy duty fiber cement board	sqm	659.00
0241	12.5 mm thick Gypsum plaster board	sqm	160.00
0367	Portland Cement (OPC-43 grade)	tonne	5700.00
0764	Calcium silicate base compound for jointing calcium silicate tiles	kg	25.00
0982	Coarse sand (zone III)	cum	1200.00
1021	Hard drawn steel wire fabric size 75 X 25 mm mesh of weight not less than 7.75 kg/sq.m	sqm	400.00
1023	Galvanised steel J or L hooks 8 mm dia	10 Nos	115.00
1190	Second class teak wood in planks	10 cudm	675.00
1208	Bitumen washer	100 Nos	30.00
1209	G.I. plain washer thick	100 Nos	35.00
1246	Silicon based Joint Sealant for Tiles	kg	150.00
1247	Rubber base Adhesive	kg	160.00
1248	Epoxy based sealing Compound	kg	502.00
1249	Acrylic based sealing compound	kg	481.00
1250	Non woven reinforcement Tape	metre	0.14
2491	Pre laminated both side solid foam uPVC profile (45x20mm) (Accuplist/Accucel/Sintex or equivalent)	metre	125.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

Code No.	Description	Unit	Rate ₹
2492	Solid foam uPVC sheet 20mm thick pre laminated on both side ( Accuplist/Accucel/Sintex )	sqm	2075.00
2493	PVC edge beading	metre	30.00
2494	Expandable fastner with plastic sleeve	each	5.00
2635	GI Screws of gauge 10, length 25 mm for fixing cement fibre board to C section	each	2.75
2636	GI Screws of gauge 10, length 45 mm for fixing cement fibre board to C section	each	3.00
2637	Vapour barrier	sqm	170.00
7009	12.5 mm thick tapered edge gypsum plain borad	sqm	160.00
7025	self tapping pan head nickle coated mild steel screws of size 13 x 3.2 mm	1000 Nos	550.00
7026	Fibre joint tape 50 mm wide (90 metre) roll	each roll	170.00
7274	Glass wool 50 mm thick	sqm	250.00
7367	Galvanised M.S. sheet 0.5 mm thick pressed channel section of size 50x32 mm	metre	60.00
7369	Galvanised M.S. sheet 0.50 mm thick pressed stud : 48x34x36 mm	metre	75.00
7383	12 mm dia 50 mm long wedge type expanded zinc alloy dash fastner	each	7.00
7388	Dash hold fastener 12.5 mm dia, 50 mm long with 6 mm dia bolt	each	12.00
7911	Chemical Rust Remover	litre	200.00
7912	Hire charges of Drill machine upto 30 mm dia	day	150.00
7913	Epoxy	kg	550.00
7914	SBR Polymer	kg	180.00
7915	Wooven PVC cloth	sqm	25.00
7916	Hire charges of sand blasting equipment	day	400.00
7917	Hire charges of compressure	day	600.00
7918	25mm thick cement concrete shotcrete(gunting) with compressor	sqm	100.00
7921	Adhesive chemical	ml	2.36
7922	Bit of drilling machine for Hole upto 30mm dia	each	475.00
7923	GI injection nipple 12mm dia, 75mm long	each	40.00
7924	Blowing compressed air for cleaning holes upto 30mm dia	each	10.00
7925	L shaped 100mm long, 10mm dia mild steel shear key	kg	67.10
7927	Acrylic Polymer chemical for cracks	kg	30.00
8013	Factory made EPS Core wallpanel /roof panel sandwiched between two Engineered welded wire fabric mesh of 3 mm dia G.I. wire mesh, with 50 mm pitch in both the directions, kept at 120-135 mm gap and interconnected by the zig zag G.I. wire of 3 mm dia at alternate row by welding.	sqm	1650.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*



<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8015	Expanded poly ethylene Foam sheet 4mm thick of Density 40kg/m <sup>3</sup>	sqm	18.00
8016	High Density expanded poly ethylene (EPE) Foam 1mm thick	sqm	850.00
8021	Bamboo wood Tile Flooring 14mm thick of minimum size 1800mm x 130mm	sqm	3775.00
8022	Bamboo wood Quarter Round 18mm thick of size 1900mm x 18mm	metre	125.00
8023	Bamboo wood door reducer 14mm thick of size 1900mm x 44mm	metre	275.00
8024	Bamboo wood Skirting 14mm thick of Size 1900mm x 85mm	sqm	325.00
8025	Bamboo wood Tile Wall Cladding 10mm thick of size 1900mm x 135mm	sqm	3375.00
8026	Bamboo wood T-mold 14mm thick of size 1900mm x 44mm	metre	275.00
8027	Bamboo wood Threshold 14mm thick of size 1900mm x 44mm	metre	275.00
8028	Bamboo wood shutter of doors	10 cudm	1800.00
8029	Bamboo wood panelling (10mm thick)	10 cudm	1800.00
8030	Superior class Bamboo wood door frame 65 mm thick,	10 cudm	1800.00
8031	Aluminium sheets Grade 5052, 4 mm thick for wall panel/deck panel/WRB panel/Kicker Panels/door closing panels	sqm	8500.00
8032	Aluminium sheets Grade 5052, 4 mm thick for Internal Corner/Column Corners/	sqm	11500.00
8033	Aluminium sheets Grade 5052, 4 mm thick for Mid Soldier/End soldier	sqm	32000.00
8034	External Corner 2050 mm	each	1400.00
8035	External Corner 825 mm	each	565.00
8036	Soldier Tie 370 mm	each	274.00
8037	Adjustable Prop - 2.00 x 2.00m	each	1080.00
8038	Pin-50	each	15.00
8039	Pin-127	each	52.00
8040	Wedge	each	14.00
8041	Wall Tie - 150 ( 355 )mm	each	45.00
8042	Polythene Sleeve 90 x 150mm	each	3.00
8043	Polythene Roll - 150mm Long.	each	6.00
8044	Vertical Soldier -1100mm	each	351.00
8045	Wall Attached Bracket 600x1000mm	each	936.00
8046	Allignment Pipe - 3.00 Mtr.	each	960.00
8047	Allignment Bracket	each	450.00
8048	Tie Rod for Bracket - 500mm	each	108.00
8049	Anchor Wing Nut Ø100 mm	each	60.00
8050	Debit Pin - 250mm	each	56.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

Code No.	Description	Unit	Rate ₹
8051	PVC Pipe Ø20mm - 150mm long	each	5.00
8052	PVC Cone	each	5.00
8053	Bolt+Nut - 16 x 80 mm	each	30.00
8054	Flat Washer Ø16, 3mm thik	each	5.00
8055	Bolt+Nut - 16 x 30 mm	each	18.00
8056	Door Spacer 45x45x5 -1135mm Long	each	340.00
8057	Door Spacer 45x45x5 - 985mm long	each	295.00
8210	Stainless steel screws 50 mm	100 Nos	260.00
8211	Stainless steel screws 40 mm	100 Nos	208.00
8212	Stainless steel screws 30 mm	100 Nos	180.00
8214	Stainless steel screws 20 mm	100 Nos	120.00
8215	Stainless steel butt hinges 125x64x1.9 mm IS : 12817 marked	10 Nos	250.00
8216	Stainless steel butt hinges 100x58x1.9 mm IS : 12817 marked	10 Nos	230.00
8217	Stainless steel butt hinges 75x47x1.8 mm IS : 12817 marked	10 Nos	150.00
8218	Stainless steel butt hinges 50x37x1.5 mm IS : 12817 marked	10 Nos	130.00
8226	Concealed zinc coated hinges 19-20 mm thick with mounting plate hettich make(code 1078660)	10 Nos	400.00
8514	40 mm long S.S screws with plastic rawl plugs	each	38.00
8515	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	1.00
8552	Mineral fibre beveled tegular edged ceiling tiles 595x595 mm, 16 mm thick	sqm	786.00
8553	Mineral fibre beveled tegular edged ceiling tiles 595x595 mm, 16 mm thick with bioblock, confirming to ISO 5 (class 100) specifications	sqm	857.00
8554	Mineral fibre beveled tegular edged ceiling tiles 595x595mm, 20 mm thick	sqm	990.00
8555	G.I. main runner 15X32mm of 3000 mm length, 0.33mm thick	each	177.00
8556	G.I. cross Tee 15X32mm of 1200mm length 0.33mm thick	each	73.00
8557	G.I. cross Tee 15X32mm of 600mm length, 0.33 mm thick	each	34.00
8558	Galvanised Iron hanger rod 6mm dia fully threaded upto 1000mm length	each	25.00
8559	Stainless steel U Channel of size (50x25x2mm)	metre	150.00
8560	Non staining water resistant Clear silicon	metre	61.00
8561	Extruded polystyrene rigid insulation board 50 mm thick	sqm	500.00
8563	15 mm thick, light weight, integral densified micro look edged,false ceiling tiles of size 595x595 mm.	sqm	900.00
8564	15 mm thick, light weight,fully perforated square/butt edge integral densified,false ceiling tiles of size 595x595 mm.	sqm	865.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8565	Galvanised MS hanger rod 6 mm dia MS fully threaded up to 1000 mm length	each	25.00
8566	Powder coated steel section main-T ceiling sections 15x42x 0.40 mm (3000 mm long)	each	225.00
8567	Galvanized mild steel perimeter wall angle 22x19x0.40 mm (3000 mm long)	each	110.00
8568	Powder coated Galvanised Iron intermediate cross-T section 15x42x0.40 mm (1200 mm long)	each	90.00
8569	Powder coated Galvanized Iron intermediate cross-T section 15x42x0.40mm (600 mm long )	each	45.00
8579	Cold form light gauge Steel C-section of thickness 0.75mm i/c zink coating/sliting etc.	kg	126.00
8580	Scrap value wastage of cold form light gauge steel	kg	17.00
8581	12 mm thick micro tegular edged semi perforated GRG (Glass Reinforced Gypsum) false celing tiles of Size 595x595 mm	sqm	624.00
8582	12 mm thick micro tegular edged fully perforated GRG (Glass Reinforced Gypsum) false celing tiles of Size 595x595 mm	sqm	706.00
8583	10 mm thick square edge fully perforated GRG (Glass Reinforced Gypsum) false celing tiles of Size 595x595 mm	sqm	706.00
8584	Galvanized iron main-T ceiling sections 15x32x0.33 mm (3000 mm long)	each	189.00
8585	Galvanized iron perimeter wall angle 24x24x0.40 mm (3000 mm long)	each	117.00
8586	Galvanized iron intermediate cross-T section 15x32x0.33 mm (1200 mm long)	each	77.00
8587	Galvanized iron intermediate cross-T section 15x32x0.33 mm (600 mm long)	each	34.00
8588	Galvanised MS hanger rod 6mm dia MS fully threaded up to 1000 mm length	each	25.00
8589	Calcium Silicate tegular edged ceiling tiles 495x495 mm and 15 mm thick on edges	sqm	860.00
8590	Galvanised Steel main Tee ceiling section Size 24x38x0.33 mm (3 metre long)	each	113.00
8591	Galvanised Steel perimeter wall Angle Size 24 x 24 x 0.40 mm (3.00 metre long)	each	63.00
8592	Galvanised Steel intermediate cross T section Size 24 x 25 x 0.33 mm (1.2 metre long)	each	38.00
8593	Galvanised Steel intermediate cross T section Size 24 x 25 x 0.33 mm ( 0.6 metre long)	each	19.00
8594	Galvanised Steel soffit cleat size 25x35x1.60 mm	each	4.00
8595	Wooden screws with plastic rawl plugs 35x8 mm	each	1.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate ₹</b>
8596	Galvanised MS 8mm outer diameter M-6 dash fastener 25mm long	each	31.00
8597	Gi Metal Tile Clip in Plain Beveled edge global white colour tiles of size 600x600 mm and 0.5 mm thick	sqm	650.00
8598	GI Metal Tile Clip in Perforated Beveled edge global white colour tiles of size 600x600 mm and 0.5 mm thick	sqm	812.00
8604	Spring T-section 24x34x0.45 mm (3.00 meter long)	metre	180.00
8605	C Wall angle section 20x30x20x0.50 mm (3.00 meter long)	metre	90.00
8606	Main C Carrier Size 10x38x10x0.70 mm (3.00 meter long)	metre	110.00
8607	Spring T-connector	each	5.00
8608	C Carrier Connector	each	11.00
8609	C Suspension Clip	each	8.00
8610	Wire Coupling Clip	each	9.00
8611	Main T ceiling sections 24x38x0.3 mm (3 metre long)	each	101.00
8612	Perimeter wall angle 24 x 24 x 0.3 mm (3 metre long)	each	75.00
8613	Intermediate cross T-Section 24x25x0.3 mm (1.2 m long)	each	34.00
8614	Intermediate cross T-Section 24x25x0.3 mm (0.6 m long)	each	17.00
8615	Hanger rod 4 mm thick	each	8.00
8616	Adjustment clip 85x30x0.8 mm	each	5.00
8617	Soffit cleat (Size 27x37x25x1.60 mm)	each	4.00
8618	Dash fastener 6 mm dia 50 mm long	each	8.00
8619	Galavanised MS L-shape level adjuster of size 85x25x2 mm	each	14.00
8784	8 mm thick Calcium silicate perforated tiles of size 595 x595 mm	sqm	690.00
8956	Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 15 kN/m in the longitudinal and transverse direction	sqm	95.00
8957	Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 20kN/m in the longitudinal and transverse direction	sqm	109.00
8958	Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 30kN/m in the longitudinal and transverse direction	sqm	178.00
8959	Bi-Axial Extruded GeoGrids of Minimum Tensile Strength 40kN/m in the longitudinal and transverse direction	sqm	260.00
8960	Geosynthetic Drainagewith two filtering nonwoven geotextiles having a "W" configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm having pores of 150 micron and tensile strength of 8.0 kN/m and having plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure ,tensile strength of 18 kN/m , with mass per unit area of 740 gsm.	sqm	504.00

**SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS**

Code No.	Description	Unit	Rate ₹
8961	Geosynthetic Drainage Composite having thermobonding a draining core - HDPE geonet comprises of two sets of parallel overlaid ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 g/m <sup>2</sup> and tensile strength of 8.0 kN/m having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/m , with mass per unit area of 830 gsm,	sqm	600.00
8962	Synthetic Geogrid having Ultimate tensile strength- 100 kN/m	sqm	200.00
8963	Synthetic Geogrid Ultimate tensile strength- 150 kN/m	sqm	220.00
8964	Synthetic Geogrid Ultimate tensile strength- 200 kN/m	sqm	300.00
8965	Synthetic Geogrid Ultimate tensile strength- 250 kN/m	sqm	330.00
8966	Synthetic Geogrid Ultimate tensile strength- 300kN/m	sqm	350.00
8967	Synthetic Geogrid Ultimate tensile strength- 350kN/m	sqm	390.00
8968	Synthetic Geogrid Ultimate tensile strength- 400kN/m	sqm	420.00
8969	Synthetic Geogrid Ultimate tensile strength- 500kN/m	sqm	500.00
8970	Synthetic Geogrid Ultimate tensile strength- 600kN/m	sqm	550.00
8971	Synthetic Geogrid Ultimate tensile strength- 700kN/m	sqm	650.00
8972	Synthetic Geogrid Ultimate tensile strength- 800kN/m	sqm	708.00
8973	Synthetic Geogrid Ultimate tensile strength- 900kN/m	sqm	841.00
8974	Synthetic Geogrid Ultimate tensile strength- 1000kN/m	sqm	950.00
8975	Synthetic Geogrid Ultimate tensile strength- 1100kN/m	sqm	1000.00
8976	Synthetic Geogrid Ultimate tensile strength- 1200kN/m	sqm	1088.00
8977	Aluminium profile industrial troughed sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676, 0.71 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	570.00
8978	Aluminium profile industrial troughed sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676, 0.91 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	736.00
9977	Carriage	L.S.	1.73
9988	Carriage and sundries	L.S.	1.73
9999	Sundries	L.S.	1.73

## 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
26.1	Providing & fixing in position Phenol bonded Bamboowood flooring with planks of sizes 14mm thick, 1800mm length (minimum) and 130 mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The flooring shall be fixed with tongue and groove interlocking system, with underlayment of 4mm thick expanded poly ethylene foam sheets having density 40kg/cum, over prepared surface with necessary quarter round planks of size 1900mm x 18mm and door reducer of size 1900mm x 44mm, wherever required. The bomboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of Engineer in-charge.	sqm	4959.20
26.2	Providing & fixing in position Phenol bonded Bamboo wood in wall skirting with planks of sizes 14mm thick, 1900mm length (minimum) and 85mm wide(minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC). The skirting shall be fixed with SS screws & rawl plugs, over underlayment of 4mm thick, expanded poly ethylene foam sheets having 40kg/cum density over prepared surface. The bomboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of Engineer in-charge.	sqm	4769.55
26.3	Providing & fixing in position Phenol bonded Bamboo wood wall cladding at all height with planks of sizes 10mm thick, 1800mm length (minimum) and 130 mm wide (minimum), in approved colour, texture and finish, having Performance Appraisal Certificate (PAC) issued by Building Materials & Technology Promotion Council (BMTPC), with necesasary profiled edges fixed with 40mm SS screws 5 nos in each tile to frame work made of second class teak wood of size 20x15 mm in centre of each tile and bottom and top of work height, 40x15mm placed at ends of each tile. The cladding shall be laid over backlayment of 1.00 mm thick expanded poly ethylene foam of density 40kg/cum in two layers, first layer on wall surface before fixing wooden frame and second layer on frame under cladding. The bomboowood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. with Eco friendly UV coating, all complete as per direction of Engineer in-charge.	sqm	4784.75
26.4	Providing & fixing in position Phenol bonded Bamboo wood panelled or panelled and glazed shutters for doors, windows, clerestorey windows with pre-molded 30mm thick planks, in approved colours, texture & finish. It shall have 10mm wide, 25mm deep groove to fit in panels. The bamboo wood shall have minimum density of 1000 Kg/cum, minimum Hardness 1000 Kgf. All styles and rails shall have profiled interlocking system locked in place by bamboo pins, all complete as per direction of Engineer in charge. (The panelling will be paid for separately).	sqm	4918.00

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

Code No.	Description	Unit	Rate ₹
26.5	Providing & fixing in position Phenol bonded Bamboo wood panelling of 10mm thick, in 25 to 40 mm thick panelled or panelled & glazed shutters for doors, windows, clerestorey windows, in approved colour, texture & finish. The bamboo wood planks shall have minimum density of 1000 Kg/cum & minimum Hardness 1000 Kgf. The panels shall have profiled interlocking system locked in place with bamboo pins all complete as per directions of Engineer in-charge. (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured).	sqm	3016.10
26.6	Providing & fixing in position 65 mm thick factory made door frame of Phenol bonded Bamboo wood (superior class, interior use), in approved colour, texture and finish. The bamboo wood shall have minimum density of 1000 Kg/cum, minimum hardness 1000 Kgf. The door frame shall have tenon & mortise interlocking system, to be fixed to the wall with 100 mm size G.I screws all complete as per directions of Engineer-in charge.	cudm	228.65
26.7	Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size between cavity wall, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/cum as per ASTM D 1622, water absorption ≤ 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardant property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the directions of Engineer-in-Charge.	sqm	649.10
26.8	Providing and fixing 50 mm thick extruded polystyrene rigid insulation board of required size underdeck on ceiling surface, complying with ISO 4898:2008 & ASTM C 578-08b - type VI, having thermal conductivity of 0.0289 W/m K as per ASTM C 578 (measured as per IS 3346), compressive strength of > 350 kPa listed as per ASTM D 1621, density of 34-36 kg/m <sup>3</sup> as per ASTM D 1622, water absorption ≤ 1% by volume as per ASTM D 2842, oxygen index of 24.1 to 28.1 listed as per ASTM D 2863, cell size 0.4 mm of dia (max) as per ASTM D 3576. Fire retardent property as per DIN 4102, Part 1 of class B2 and as per ASTM E84 class A, fixed with suitable water based adhesive and fastener, complete in all respect as per the directions of Engineer-in-Charge.	sqm	685.75
26.9	Providing and fixing factory made solid Foam uPVC profile for kitchen cabinet frame (45x20 mm) of approved shade, quality and make. The profile shall be laminated on both sides, made from rigid foam sheets (Single extruded) having density 600 Kg/cum and the exposed edges sealed with PVC edge beading of same shade and colour. The frame shall be fire retardent with necessary screw holding capacity. Frame shall be fixed to wall using Expendable Fastener with necessary stainless steel screws, all complete as per directions of Engineer-in-charge.	metre	294.65

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

Code No.	Description	Unit	Rate ₹
26.10	Providing and fixing factory made Kitchen Cabinet Shutter/Partition 20 mm nominal thickness of approved shade, quality and make, made from rigid foam sheets (Single extruded) having density 600 Kg/cum and laminated on both side by laminate Sheet/PVC foil lamination. The exposed edges shall be sealed with PVC edge beading of same shade and colour. The shutter shall be fire retardent having necessary screw holding capacity. Shutter shall be fixed to frame using approved hinges with necessary stainless steel screws, all complete as per direction of Engineer-in-charge.	sqm	3536.05
26.11	Providing and fixing concealed hinge of approved quality for 19-20mm thick door with stainless steel screws complete :	each	82.30
26.12	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 15kN/m in the longitudinal and transverse direction, with 5kN/m and 7kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	135.20
26.13	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 20kN/m in the longitudinal and transverse direction, with 7kN/m and 14kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	153.10
26.14	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid conforming to MORTH SPECIFICATION for base/sub-base reinforcement having minimum tensile strength 30kN/m in the longitudinal and transverse direction, with 10.5 kN/m and 21kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	241.25
26.15	Supplying & laying of bi-axial extruded high modulus polypropylene geogrid for base/sub-base reinforcement having minimum tensile strength 40kN/m in the longitudinal and transverse direction, with 14kN/m and 28kN/m tensile strength at 2% and 5% strain respectively in the longitudinal and transverse direction, junction efficiency not less than 95% and with 38mm X 38mm mesh opening.	sqm	346.00
26.16	Supplying & laying of drainage composite for use behind walls, between two different fills, along side-drains of road, below concrete lining of canals etc. Geocomposite for planar drainage, realized by thermo bonding a draining core in extruded monofilaments with two filtering nonwoven geotextiles that may also be working as separation or protecting layers. The draining three dimensional core will have a "W" configuration as longitudinal parallel channels. Minimum thickness to be 7.2mm, with two filtering UV stabilized polypropylene nonwoven geotextile of minimum thickness of 0.75mm characteristic opening size (O90) of 110 micron and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite		

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*



Code No.	Description	Unit	Rate ₹
	having in plane flow capacity of 2.1 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 18 kN/m , with mass per unit area of 740 gsm, supplied in the form of roll for easy transportation to site of work as per detailed specification all complete as per directions of Engineer in charge.	sqm	657.80
26.17	Supplying & laying of drainage composite for use behind walls, between two different fills, alongside drains of road, below concrete lining of canals etc. having thermobonding a draining core - HDPE geonet comprises of two sets of parallel overlaid ribs integrally connected to have a rhomboidal shape with a polyethylene film and a nonwoven geotextile having mass per unit area 130 gsm and tensile strength of 8.0 kN/m that will be working as separation or protecting layer, geocomposite having in plane flow capacity of 0.7 L / (m.s) at hydraulic gradient of 1.0 & 20 kPa pressure and tensile strength of 13.5 kN/m , with mass per unit area of 830 gsm, at easily accessible location including top and bottom, with all leads and lifts, manpower and machinery, materials, labour etc. complete and as directed by Engineer -in - Charge.	sqm	780.45
26.18	Supplying and laying high strength flexible geogrids (HSFG) as soil reinforcement / basal reinforcement as per MORTH 3100 and IRC 113, made of high tenacity polyester core with polyethylene coating with minimum Long Term Design Strength (LTDS) of more than 50% of ultimate tensile strength at 30 degree Celcius corresponding to 12 % strain .		
26.18.1	Ultimate tensile strength- 100 kN/m	sqm	269.35
26.18.2	Ultimate tensile strength- 150 kN/m	sqm	294.95
26.18.3	Ultimate tensile strength- 200 kN/m	sqm	397.15
26.18.4	Ultimate tensile strength- 250 kN/m	sqm	435.45
26.18.5	Ultimate tensile strength- 300 kN/m	sqm	461.00
26.18.6	Ultimate tensile strength- 350 kN/m	sqm	512.15
26.18.7	Ultimate tensile strength- 400 kN/m	sqm	550.45
26.18.8	Ultimate tensile strength- 500 kN/m	sqm	652.65
26.18.9	Ultimate tensile strength- 600 kN/m	sqm	716.55
26.18.10	Ultimate tensile strength- 700 kN/m	sqm	844.30
26.18.11	Ultimate tensile strength- 800 kN/m	sqm	918.40
26.18.12	Ultimate tensile strength- 900 kN/m	sqm	1088.35
26.18.13	Ultimate tensile strength- 1000 kN/m	sqm	1227.60
26.18.14	Ultimate tensile strength- 1100 kN/m	sqm	1291.50
26.18.15	Ultimate tensile strength- 1200 kN/m	sqm	1403.95
26.19	Providing at all heights, levels and locations Aluminium profile industrial troughed sheet of Alloy 31500/31000/40800, conforming to IS 1254, IS 737, IS 2676. The sheet shall be fixed using self drilling/self tapping SS screws of size 5.5x65 mm with EPDM seal		

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
	complete upto required pitch in horizontal, vertical or curved surfaces i/c cutting to size and shape where required as per specifications, detail drawings and direction of Engineer-in-Charge. The rate shall be inclusive of all screws, seal, ridge, labour, scaffolding, machinery for fixing and approved sealant where required etc. but excluding the cost of purlins, rafters and trusses.		
26.19.1	0.71 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	790.30
26.19.2	0.91 mm thick, the profile detail width 1044/920 mm, cover width 1000/875 mm.	sqm	997.10
26.20	Providing round the clock security guard without gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete,as per directions of Engineer-in-charge.(One job means 8 hour's duty).	each job	487.95
26.21	Providing round the clock security guard with gun for watch & ward of Government premises and its all belongings by deploying neatly dressed security guards in 8 hour's shift including necessary T&P like torch, lathi and uniform etc.complete,as per directions of Engineer-in-charge.(One job means 8 hour's duty).	each job	535.10
26.22	Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991,in true horizontal level suspended on interlocking metal T-Grid of hot dipped galvanised iron section of 0.33mm thick (galvanized @ 120 grams per sqm including both sides) comprising of main-T runners of size 24x38 mm of length 3000 mm, cross - T of size 24x32 mm of length 1200 mm and secondary intermediate cross-T of size 24x32 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x25x2 mm. Galvanised iron perimeter wall angle of size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directions of Engineer-in-Charge.		
26.22.1	With 15 mm thick tegular edged light weight calcium silicate false ceiling tiles.	sqm	1533.45
26.23	Providing and fixing false ceiling at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns		

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
	having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level suspended on interlocking metal powder coated T-Grid of hot dipped galvanised iron section of 0.40 mm thick on Silhouette profile, rotary stiched double webbed white with 6 mm reveal profile (white/black), comprising of main-T runners of size 15x42 mm of length 3000 mm, cross - T of size 15x42 mm of length 1200 mm and secondary intermediate cross-T of size 15x42 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 22x19x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40mm long dry wall S.S screws. The work shall be carried out as per specifications, drawing and as per directions of the Engineer-in-Charge.		
26.23.1	With 15 mm thick integral densified micro edge light weight calcium silicate false ceiling tiles	sqm	1761.15
26.24	Providing and fixing in position wall panelling at all heights with integral densified calcium silicate panels/tiles of size 595 x 595mm, having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 &7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, comprising of a frame made from especially fabricated galvanised mild steel sheet 0.50 mm thick pressed section (galvanizing @120 grams per sqm including both sides) i.e.vertical studs of size 48 x 34 x 36 mm are placed at 600mm center to center in a floor and ceiling channel section of size 50 x 32mm fixed to the floor and soffit at 600mm centers using 12mm dia,50mm long wedge type expanded zinc alloy dash fastner with 10mm bolt. This same channel is then to be fixed in horizontal direction at 600mm center to center so as to form a grid of 600mm x 600mm. Glasswool of 50mm thickness is then to be inserted in the slots and finally calcium silicate non combustible panels/tiles are to be screw fixed with self tapping pan head nickel coated mild steel screws of size 13 x 3.2mm on to this grid leaving an even groove of 1 mm between the panels. The joints between the panels are to be duly jointed and finished using recommended jointing calcium silicate based compound and fiber joint tape roll 50mm wide (90 metre )roll and two coats of primer suitable for panelling as per manufacturer's specification as per direction of Engineer-in-Charge all complete.		
26.24.1	With 15 mm thick fully perforated square/butt edge light weight calcium silicate panels/ tiles	sqm	2150.20

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
26.25	Providing and fixing 15 mm thick false ceiling tiles at all heights with integral densified calcium silicate reinforced with fibre and natural filler false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having NRC (Noise Reduction coefficient) of 0.50 (minimum) as per IS 8225:1987, Light reflectance of 85% (minimum). Non combustible as per BS:476 (part-4), fire performance as per BS:476 (part 6 & 7), humidity resistance of 100%, thermal conductivity < 0.043 W/m K as per ASTM 518:1991, in true horizontal level on the existing frame work consisting of T-sections and Lsections suitably fixed according to tile size as per direction of Engineer-in-charge.	sqm	1291.20
26.26	Providing & fixing false ceiling at all heights with GRG (Glass Fibre Reinforced Gypsum) false ceiling tiles of Size 595x595 mm of approved texture, design and patterns having moisture content less than 2%, humidity resistance of 99%, NRC 0.50 to 0.75 as per IS 8225:1987, Non combustible as per BS 476 (part-4)-1970 and light reflectance of 85% (minimum) to be laid in true horizontal level suspended on inter-locking metal T-Grid of hot dipped galvanised iron section of 0.33mm thick (galvanized @ 120 grams per sqm including both sides) comprising of main-T runners of size 15x32 mm of length 3000 mm, cross - T of size 15x32 mm of length 1200 mm and secondary intermediate cross-T of size 15x32 mm of length 600mm to form grid module of size 600 x 600 mm, suspended from ceiling using galvanised mild steel items (galvanizing @ 80 grams per sqm) i.e. 50 mm long, 8 mm outer diameter M-6 dash fasteners, 6 mm dia fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm. Galvanised iron perimeter wall angle of size 24x24x0.40 mm of length 3000 mm to be fixed on periphery wall / partition with the help of plastic rawl plugs at 450 mm center to center and 40 mm long dry wall SS screws. The work shall be carried out as per specifications, drawing and as per directions of Engineer-in-Charge.		
26.26.1	With semi perforated 12 mm thick micro tegular edged GRG false ceiling tiles.	sqm	1352.90
26.26.2	With fully perforated 12 mm thick micro tegular edged or 10 mm thick square edged GRG false ceiling tiles.	sqm	1452.90
26.27	Providing and fixing mineral fibre false ceiling tiles at all heights of size 595X595mm of approved texture, design and pattern. The tiles should have Humidity Resistance (RH) of 99%, Light Reflectance ≥ 85%, Thermal Conductivity k = 0.052 - 0.057 w/m K, Fire Performance as per (BS 476 pt - 6 & 7) in true horizontal level suspended on interlocking T-Grid of hot dipped all round galvanised iron section of 0.33 mm thick (galvanized @120 gsm ) comprising of main T runners of 15x32 mm of length 3000 mm, cross T of size 15x32mm of length 1200 mm and secondary intermediate cross T of size 15x32 mm of length 600 mm to form grid module of size 600x600 mm suspended from ceiling using galvanised mild steel item (galvanised @80gsm) 50 mm long 8mm outer diameter M-6 dash fasteners, 6 mm diameter fully threaded hanger rod upto 1000 mm length and L-shape level adjuster of size 85x25x2 mm, spaced		

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
	at 1200 mm centre to centre along main 'T'. The system should rest on periphery walls /partitions with the help of GI perimeter wall angle of size 24x24X3000 mm made of 0.40 mm thick sheet, to be fixed to the wall with help of plastic rawl plug at 450 mm centre to centre & 40 mm long dry wall S.S. screws. The exposed bottom portion of all T-sections used in false ceiling support system shall be pre-painted with polyester baked paint, for all heights. The work shall be carried out as per specifications, drawings and as per directions of the engineer-in-charge.		
26.27.1	With 16 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.55 to 0.6)	sqm	1535.00
26.27.2	With 20 mm thick beveled tegular mineral fibre false ceiling tile (NRC 0.7)	sqm	1783.80
26.27.3	With 16 mm thick beveled tegular mineral fibre Anti-microbial false ceiling tile	sqm	1621.60
<b>REPAIR AND REHABILITATION ITEMS</b>			
26.28	Chipping of unsound/weak concrete material from slabs, beams, columns etc. with manual Chisel and/ or by standard power driven percussion type or of approved make including tapering of all edges, making square shoulders of cavities including cleaning the exposed concrete surface and reinforcement with wire brushes etc. and disposal of debris for all lead and lifts all complete as per direction of Engineer-In-Charge		
26.28.1	75mm average thickness	sqm	167.15
26.28.2	50mm average thickness	sqm	111.55
26.28.3	25 mm average thickness	sqm	56.20
26.29	Cleaning of reinforcement from rust from the reinforcing bars to give it a total rust free steel surface by using alkaline chemical rust remover of approved make with paint brush and removing loose particles after 24 hours of its application with wire brush and thoroughly washing with water and allowing it to dry, all complete as per direction of Engineer-In-Charge.		
26.29.1	Bars upto 12 mm diameter	metre	4.15
26.29.2	Bars above 12 mm diameter	metre	8.30
26.30	Drilling suitable holes in reinforced or plain cement concrete with power driven drill machine to a minimum depth of 100mm upto 200mm in RCC beams, lintels, columns and slabs to introduce steel bars for sunshades/balconies including fixing the steel bars in position using epoxy resin anchor grout of approved make but excluding the cost of reinforcement, all complete as per direction of Engineer-In-Charge.		
26.30.1	Upto and including 12mm dia.	each	71.15
26.31	Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-In-charge complete in all respect.		

*SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS*

Code No.	Description	Unit	Rate ₹
26.31.1	SBR Polymer (@10% of cement weight) modified cementitious bond coat @2.2 kg cement per sqm of surface area mixed with specified proportion of approved polymer	sqm	87.55
26.31.2	Epoxy bonding adhesive having coverage 2.20 sqm/kg of approved make	sqm	314.95
26.32	Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) as per specifications and directions of Engineer-in-charge. <b>Note:</b> Measurement and payment: The pre-measurement of thickness shall be done just after the surface preparation is completed and Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding / tapping with a blunt metal instrument and/or the 75mm size cube crushing strength at the end of 28 days to be not less than 30 N/ mm <sup>2</sup> ).		
26.32.1	12 mm average thickness.	sqm	203.85
26.32.2	25 mm average thickness in 2 layers.	sqm	330.90
26.32.3	50 mm average thickness in 3 layers.	sqm	661.75
26.33	Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members having minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness. <b>Note:</b> Rates shall be for finished surface area of concrete and shall include the cost of labour, concrete and appropriate approved Super-Plasticiser for rendering concrete as flowable and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)		
26.33.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	478.40
26.33.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	717.65
26.34	Providing and laying SBR Polymer modified (of approved make @ minimum 2% by wt. of cement used) plain/reinforced concrete jacket for the structural members e.g. columns, pillars, piers, beams etc with concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10mm maximum size in proportion as per design criteria] with specified average thickness all-round existing core of RCC member.		

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
	<b>Note:</b> Rates shall be for finished surface area of concrete and shall include the cost of making holes in existing RCC slab, if required, for pouring concrete in shuttering mould of jacket and appropriate approved Super-Plasticiser for rendering concrete as flowable self compacting and SBR polymer but shall exclude cost of reinforcement, bond coat, Shear Keys, centering and shuttering, strutting, propping etc (Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument)		
26.34.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	478.40
26.34.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	717.65
26.34.3	100mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	956.85
26.35	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge.  (The payment shall be made on the basis of actual weight of approved grout injected.)		
26.35.1	Stirrer mixed Acrylic Polymer of approved make @ 2% of weight of cement used) modified Cement slurry made with non shrink compound in concrete/RCC work	kg	69.50
26.35.2	Stirrer mixed SBR Polymer (of approved make) modified Cement slurry made with Shrinkage Compensating Cement in concrete/RCC work.	kg	73.00
26.35.3	Epoxy injection grout in concrete/RCC work of approved make	kg	644.45
26.36	Providing, erecting, maintaining and removing temporary protective screens made out of specified fabric with all necessary fixing arrangement to ensure that it remains in position for the work duration as required by the Engineer-in-charge.		
26.36.1	Wooven PVC cloth	sqm	39.05
26.37	Cleaning of exposed concrete surface of sticking material including loose and foreign material by sand blasting with coarse sand followed by and including cleaning with oil free air blast as per direction of Engineer in charge.	sqm	252.60
26.38	Shotcreting R.C.C. columns, beams and slabs etc. in layers with approved design mix concrete having the specified minimum characteristic compressive strength [with ordinary portland cement, coarse sand and graded stone aggregate of 10 mm maximum size in proportion as per design criteria] including the cost of centering and shuttering at edges and corners etc. as directed by Engineer-in-Charge		

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Rate ₹
	<b>Note:</b> Rates shall include the providing necessary ground wires etc. The levelling gauges, if used, shall be paid for separately. Payment under this item shall be made only after proper wet curing has been done and surface has been satisfactorily evaluated by sounding/tapping with a blunt metal instrument.		
26.38.1	25mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	498.45
26.38.2	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	831.30
26.38.3	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	sqm	1217.60
26.39	Providing and inserting 12mm dia galvanised steel injection nipple in honey comb area and along crack line including drilling of holes of required diameter (20mm to 30mm) up to depth from 30mm to 80mm at required spacing and making the hole & crack dust free by blowing compressed air, sealing the distance between injection nipple with adhesive chemical of approved make and allow it to cure complete as per direction of Engineer-In-Charge.	each	147.50
26.40	Providing and fixing hard drawn steel wire fabric of size 75 x25 mm mesh or other suitable size wire mesh to be fixed & firmly anchored to the concrete surface by means of "L" shaped mild steel shear key welded with existing reinforcement including the cost of materials, labour, tool & plants as approved by engineer-in-charge.	sqm	601.60
<b>NEW TECHNOLOGY ITEMS</b>			
26.41	<p>Designing, providing, installing and fixing factory finished custom designed cold form Light Gauge Steel Framed super structure comprising of steel wall panel, trusses, purlins etc manufactured out of minimum 0.75 mm thick steel sheet as per design requirements. The steel sheet shall be galvanized (AZ-150 gms Aluminium Zinc Alloy coated steel having minimum yield strength 300- 550 Mpa) conforming to AISI specifications and IBC 2009 for cold formed steel framing and construction and also as per IS: 875-1987, ISO 800-1984 and IS: 801- 1975. The wind load shall be as per provisions of IS 875 (part -III). LGSFS frame shall be designed as per IS: 801 using commercially available software such as Frame CAD Pro-11.7/ STAAD PRO-V8i/ArchitekV2.5.16/ Revit architecture-2011 or equivalent. Proper usage of Connection Accessories like Heavy Duty Tension Ties, Light Duty Hold-ons, Twist Straps (to connect truss with wall frames), Strong Tie, Tie Rod, H-Brackets, Boxing Sections, L-Shaped Angles for better structural stability.</p> <p>The framing section shall be cold form C-type having minimum web depth 89 mm x 39mm flange x 11mm lip in required length as per structural design requirement duly punched with dimple/slot at required locations as per approved drawings. The slots will be along centre line of webs and shall be spaced minimum 250mm away from both ends of the member. The frame can be supplied in panelized or knock down condition in specific dimensions and</p>		



Code No.	Description	Unit	Rate ₹
	fastened with screws extending through the steel beyond by minimum of three exposed threads. All self drilling tapping screws for joining the members shall have a Type II coating in accordance with ASTM B633(13) or equivalent corrosion protection of gauge 10 & 12, TPI 16 & 8 of length 20mm. The frames shall be fixed to RCC slab or Tie beam over Neoprene rubber using self expanding carbon steel anchor bolt of dia as per approved drawings. design subject to minimum 12mm diameter and 121mm length conforming to AISI 304 and 316 at 500mm c/c with minimum embedment of 100mm in RCC (RCC to be paid separately) and located not more than 300mm from corners or termination of bottom tracks complete in all respects. The item also includes the submission of stability reports duly examined and issued by any NIT/IIT. The rate includes the concept design, detailed design, fabrication of sections, transportation, installation and all required fixing arrangement at site as described above.	Kg	174.10
26.42	Providing and fixing of external wall system on Light gauge steel frame work with . Outer face having 6mm thick heavy duty fiber cement board fixed on 9mm thick heavy duty fiber cement board confirming to IS 14862:2000, category IV type A (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make. A groove of 2 mm to 3mm shall be maintained and grooves shall be sealed with silicon based sealant. The board shall be fixed in a staggered pattern. Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm and internal face 12.5mm thick gypsum plaster board fixed on 8mm thick fiber cement board confirming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately).	Sqm	2783.65
26.43	Providing and fixing internal wall panels on Light gauge steel frame work with 12.5mm thick gypsum plaster board conforming IS 2095:2011 fixed on 8mm thick fiber cement board conforming to IS 14862:2000 of category III type B (High pressure steam cured) as per standard sizes fixed with self-drilling / taping screws / fasteners @ 60cm c/c of approved make, Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm. Proper taping and jointing to be done using fiber mesh tape and epoxy and acrylic based jointing compound for seamless finish.(cost of frame work to be paid for separately)	Sqm	1738.45
26.44	Providing and fixing in all exterior face panels breathable vapour barrier underneath the cement fiber board as per National Building Code 2009 complete as per direction of Engineer-in-charge.	Sqm	238.05
26.45	Supplying and installation of moisture resistant/fire resistant 6 mm thick Heavy duty fiber cement board (High pressure steam cured) conforming to IS 14862:2000 of category III type B as per standard sizes fixed with self-drilling / taping screws. Screws shall be of counter sunk rib head of 1.60mm to 4 mm thick of 8 to 10 gauge of length varying from 25 to 45 mm.	Sqm	869.15

**SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS**

Code No.	Description	Unit	Rate ₹
26.46	Providing and fixing in position, 200 mm thick factory made Expanded Polystyrene Core (EPS Core) wall panels consisting of EPS core sandwiched between two Engineered sheets of welded wire fabric mesh duly finished with shotcrete materials on outer faces. The fabric mesh shall be made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of the wall, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree) . The EPS core shall consist of 100 mm thick EPS of density not less than 20 kg/ per cum. Both the outer faces of the panel shall be finished by applying the layer of 50 mm thick cement mortar 1:3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting/guniting equipment etc at a pressure not less than 1 bar (100Kn/m2) and both surfaces finished with trowel. Fixing operations of wall panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.	sqm	3246.15
26.47	Providing and fixing in position, 230mm thick factory made Expanded Polystyrene Core (EPS Core) roof/floor panels made of 3 mm dia G.I. wire mesh with 50 mm pitch in both the directions and on both faces of panel, kept at 120-135 mm gap and connected by the zig zag G.I. wire of 3 mm dia at alternate row by welding (at an angle ranging from 50-70 degree). The EPS core shall consist of 100 mm thick EPS of density not less than 20kg/ per cum. The bottom side of the panel shall be finished by applying a layer of 60-65 mm thick cement mortar 1 : 3 {1 cement: 3 coarse sand (not having more than 40% stone chips of size upto 6 mm)} with the help of shotcreting equipment etc at a pressure of not less than 1 bar (100Kn/m2) and surface finished with trowel. The top face of the panel shall be provided and finished by applying 70-75 mm thick layer of cement concrete 1:1.5: 3 (1 cement :1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size). Fixing operations of roof/floor panels shall be completed in all respect as per drawings and specifications and under the overall direction of the Engineer-in-charge.	sqm	3436.35
26.48	Providing and fixing of customized Aluminium formwork for monolithic construction RCC members with a repetitive usage of 100 times using grade 5052 aluminium for panel sheets of minimum 4 mm thick and grade 6061 (Type-6) aluminium for extruded sections. The form work includes of beam components i.e.beam side panel,prop head for soffit beam,beams soffit panel,beam soffit bulk head and deck componets i.e. deck panel, deck prop, prop length, deck mid, soffit length, deck beam bar and wall components i.e. wall panel, rocker, kiker and internal soffit corner, external soffit corner,external corner,internal corner etc.,The panels are held in position by a simple pin and wedge system that passes through holes in the out side rib of each panel.The tolerance of finished panels to be (-1 mm), and shall conform to IS 14687-1999. Pins and wedges to be made of high grade mild steel,all complete as per direction of Engineer-in-charge.(Cost of RCC work shall be paid seperately)	sqm	149.45

SUB HEAD : 26.0 NEW TECHNOLOGIES AND MATERIALS

# **COEFFICIENTS FOR CEMENT CONSUMPTION**

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 3.0 MORTAR

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
3.1	Cement Mortar 1:1 (1 cement : 1 fine sand).	cum	10.20
3.2	Cement mortar 1:2 (1 cement : 2 fine sand).	cum	6.80
3.3	Cement mortar 1:3 (1 cement : 3 fine sand).	cum	5.10
3.4	Cement mortar 1:4 (1 cement : 4 fine sand).	cum	3.80
3.5	Cement mortar 1:5 (1 cement : 5 fine sand).	cum	3.10
3.6	Cement mortar 1:6 (1 cement : 6 fine sand).	cum	2.50
3.7	Cement mortar 1:2 (1 cement : 2 coarse sand).	cum	6.80
3.8	Cement mortar 1:3 (1 cement : 3 coarse sand).	cum	5.10
3.9	Cement mortar 1:4 (1 cement : 4 coarse sand).	cum	3.80
3.10	Cement mortar 1:5 (1 cement : 5 coarse sand).	cum	3.10
3.11	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	2.50
3.12	Cement mortar 1:2 (1 cement : 2 stone dust).	cum	6.80
3.13	Cement mortar 1:2 (1 cement : 2 marble dust).	cum	6.80
3.14	Cement mortar 1:5 (1 cement : 5 marble dust).	cum	3.10
3.15	White cement mortar 1:2 (1 white cement : 2 marble dust).	cum	6.80*
3.16	White cement mortar 1:3 (1 white cement : 3 marble dust).	cum	5.10*
3.17	White cement mortar 1:5 (1 white cement : 5 marble dust).	cum	3.10*

\* white cement

# 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

## 4.0 CONCRETE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>CEMENT CONCRETE (CAST - IN- SITU)</b>			
4.1	P/L cement concrete - all works upto plinth level :		
4.1.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.00
4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	3.20
4.1.4	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size)	cum	3.20
4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	2.20
4.1.6	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	cum	2.20
4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	cum	1.70
4.1.10	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	cum	1.30
4.1.11	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size)	cum	1.30
4.1.12	1:2:3½:9 (1 ordinary portland cement : 2 Fly ash : 3½ coarse sand : 9 graded stone aggregate 40 mm nominal size)	cum	1.70
4.1.13	1:2½:4:11 (1 ordinary portland cement : 2½ fly ash : 4 coarse sand : 11 graded stone aggregate 40 mm nominal size)	cum	1.30
4.2	P/L cement concrete in retaining walls, return walls etc.:		
4.2.2	1:1½:3 (1 cement:1½ coarse sand:3 graded stone aggregate 20 mm nominal size)	cum	4.00
4.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	3.20
4.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	cum	2.20
4.2.8	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	cum	1.30

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
4.4	P/L cement concrete in kerbs, steps etc.:		
4.4.1	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.00
	<b>CEMENT CONCRETE (PRE-CAST)</b>		
4.5	P/L precast cement concrete string or lacing courses, copings etc.:		
4.5.1	1:1½:3 (1 cement:1½ coarse sand:3 graded stone aggregate 20 mm nominal size)	cum	4.05
4.6	P/L precast cement concrete in kerbs, edgings etc.:		
4.6.1	1:1.5:3 ( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.05
4.7	P/L precast cement concrete solid blocks:		
4.7.1	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.56
4.8	P/L precast cement concrete hollow blocks:		
4.8.1	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	2.899
4.9	Precasting and placing in position 125 mm dia Bollards 600 mm high.	each	0.097
	<b>DAMP- PROOF COURSE</b>		
4.10	P/L D.P.C. 40 mm thick with C.C. (1:2:4).	sqm	0.13
4.11	P/L D.P.C. 50 mm thick with C.C. (1:2:4).	sqm	0.16
	<b>MISCELLANEOUS</b>		
4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6	sqm	0.11
4.19	P/L Ready mixed concrete using flyash:		
4.19.1	All works upto plinth level		
4.19.1.1	M-15 grade plain cement concrete	cum	2.40
4.19.1.2	M-10 grade plain cement concrete	cum	2.20
4.19.2	All works above plinth and upto floor V level		
4.19.2.1	M-15 grade plain cement concrete	cum	2.40
4.19.2.2	M-10 grade plain cement concrete	cum	2.20

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of cement per unit quantity of work (Quintals)</b>
4.20	P/L ready mix plain cement concrete :		
4.20.1	All works upto plinth level		
4.20.1.1	M-15 grade plain cement concrete	cum	2.40
4.20.1.2	M-10 grade plain cement concrete	cum	2.20
4.20.2	All works above plinth and upto floor V level		
4.20.2.1	M-15 grade plain cement concrete	cum	2.40
4.20.2.2	M-10 grade plain cement concrete	cum	2.20

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 5.0 REINFORCED CEMENT CONCRETE

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>CAST-IN-SITU</b>			
5.1	P/L R.C.C. upto plinth level :		
5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.00
5.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	3.20
5.2	R.C.C work in walls etc.:		
5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4.00
5.3	R.C.C. (1:1.5:3) work in beams etc.	cum	4.00
5.4	R.C.C. (1:1.5:3) work in kerbs, steps etc.	cum	4.00
5.5	R.C.C. (1:1.5:3) work in arches, domes etc.	cum	4.00
5.6	R.C.C. (1:1.5:3) work in chimneys & shafts.	cum	4.00
5.7	R.C.C. (1:1.5:3) work in well-steining.	cum	4.00
5.8	R.C.C. (1:1.5:3) work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards.	cum	4.00
<b>PRE - CAST R.C.C.</b>			
5.12	P/F precast R.C.C. (1:1.5:3) work in string courses, bands, copings, bed plates, anchor blocks, plain window sills etc.	cum	4.00
5.13	P/F precast R.C.C. (1:1.5:3) in small lintels not exceeding 1.5m clear span.	cum	4.00
5.14	P/F precast R.C.C. (1:1.5:3) in mouldings as in cornices, windows sills etc.	cum	4.00
5.15	P/F precast R.C.C. (1:1.5:3) in lintels, beams and bressumers etc.	cum	4.00
5.16	P/F precast R.C.C. (1:1.5:3) in shelves.	cum	4.05
5.17	P/F precast R.C.C. (1:1.5:3) in vertical & horizontal fins individually or forming box louvers.	cum	4.00
5.18	Fixing precast cement concrete Jali (1:2:4).		
5.18.1	50 mm thick	100 sqm	1.64*
5.18.2	40 mm thick	100 sqm	1.64*
5.18.3	25 mm thick	100 sqm	1.64*

\* Cement for fixing only.



Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>ENCASING ROLLED STEEL SECTION</b>			
5.19	Encasing rolled steel sections, in beams and columns, with cement concrete (1:1.5:3).	cum	4.00
5.20	Encasing rolled steel section in grillages with cement concrete (1:1.5:3).	cum	4.00
<b>MISCELLANEOUS</b>			
5.23	Smooth finishing of exposed surface of R.C.C. work with 6 mm thick cement mortar (1:3).	100 sqm	3.67
5.24	Rendering smooth the top of suspended floors, landings and staircases with cement mortar (1:2).	100 sqm	4.17
5.27	Providing and filling in position bitumen mix filler.	cum	0.032
<b>DESIGN MIX CONCRETE</b>			
5.33	P/L Design mix concrete (M-25).	cum	3.30*
5.34	Extra for providing richer mixes at all floor levels :		
5.34.1	Providing M-30 grade concrete instead of M-25 grade B.M.C/ R.M.C.	cum	0.10*
5.34.2	Providing M-35 grade concrete instead of M-25 grade B.M.C./ R.M.C.	cum	0.20*
5.34.3	Providing M-40 grade concrete instead of M-25 grade B.M.C./ R.M.C.	cum	0.30*
5.36	P/F precast R.C.C. in waffle units.	cum	4.16*
5.37	P/L RMC manufactured in fully automatic batching plant M-25 grade R.C.C.	cum	3.30*
5.40	P/L design mix cement concrete M-25 using Fly ash. <b>* Actual weight for design mix will be worked out taking into consideration the cement requirement as per particular mix design.</b>	cum	3.30*
5:47:1	P/F factory made precast RCC M-40 doors & windows	metre	0.049
5:47:2	P/F factory made precast RCC M-40 doors & windows	metre	0.044
5:47:3	P/F factory made precast RCC M-40 doors & windows	metre	0.041
5.48	Providing and laying RCC for construction of piers abutments portal frames etc.	cum	4.80
5.49	Constructing cast insitu RCC diaphragm wall by providing .....	cum.	4.14

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 6.0 BRICK WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
6.1	Brick work in foundation & plinth with non modular bricks.		
6.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.95
6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.625
6.2	Brick work in foundation & plinth with modular bricks.		
6.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.836
6.2.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.55
6.3	Brick work with machine moulded perforated bricks.		
6.3.1	With non modular bricks.	cum	0.625
6.3.2	With modular bricks.	cum	0.55
6.4	Brick work in superstructure.		
6.4.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.95
6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.625
6.7	Half brick masonry in cement mortar (1:3) for closing cavity 5 to 7.5 cm wide in cavity wall.	100 metre	3.86
6.8	Brick work 7 cm in cement mortar (1:3).	100 sqm	9.23
6.9& 6.10	Brick work in plain & gauged arches in cement mortar (1:3).	cum	1.28
<b>HALF BRICK MASONRY</b>			
6.12& 6.13	Half brick masonry in foundations & plinth and superstructure.		
6.12.1 & 6.13.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	100 sqm	14.28
6.12.2 & 6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	100 sqm	10.64
<b>BRICK TILE WORK</b>			
6.16	ile brick masonry in foundation and plinth. :		
6.16.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	1.52
6.16.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	1.00
6.17& 6.18	Tile brick masonry with m/c moulded tiles in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	1.00
6.20 & 6.21	Tile brick masonry with tile bricks in plain/gauged arches work in in cement mortar (1:4).	cum	1.33
6.22	Tile brick masonry work 5 cm thick in cement mortar (1:3).	100 sqm	7.65

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>HONEY COMB WORK</b>			
6.23	Honey-comb brick work 10/11.4 cm thick in cement mortar 1:4.	100 sqm	6.56
<b>EXPOSED BRICK WORK</b>			
6.26	Brick work with selected bricks in cement mortar (1:6).	cum	0.625
6.27	Brick work with modular bricks in cement mortar (1:6).	cum	0.55
6.28	Brick work with machine moulded modular bricks in cement mortar (1:6).	cum	0.55
6.29	Brick work with m/c moulded F.P.S. bricks in cement mortar (1:6).	cum	0.625
6.30	Brick work with machine moulded perforated F.P.S. bricks in cement mortar (1:6).	cum	0.625
6.31	Brick work with machine moulded perforated modular bricks in cement mortar (1:6).	cum	0.55
6.32	Brick work with clay flyash F.P.S. brick.		
6.32.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.95
6.32.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.625
6.34	Brick work with non modular fly ash lime bricks (FALG Bricks) in :		
6.34.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.95
6.34.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	0.625
6.35	Brick work with modular calcium silicate bricks machine moulded in :		
6.35.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	0.836
6.35.3	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	0.55
6.36	Brick work with modular extruded burnt fly ash clay sewer bricks in :		
6.36.1	Cement Mortar 1:4 ( 1 cement : 4 coarse sand)	cum	0.836
6.37	Brick work with modular extruded burnt fly ash clay sewer bricks in cement mortar (1:3).	cum	1.275
6.38	Autoclaved aerated cement blocks masonry with 100mm thick AAC blocks in cement mortar (1:4).	cum	0.57
6.44	Brick edging 7 cm wide in cement mortar (1:4).	100 metre	0.137
6.45	Half brick masonry with non modular FALG bricks.		
6.45.1	Cement mortar 1:3 (1 cement :3 coarse sand).	100 sqm	14.28
6.45.2	Cement mortar 1:4 (1 cement :4 coarse sand).	100 sqm	10.64

*COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 6.0 BRICK WORK*

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 7.0 STONE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>RANDOM RUBBLE MASONRY</b>			
7.1& 7.2	Random rubble masonry with cement mortar (1:6).	cum	0.825
<b>COURSED RUBBLE MASONRY</b>			
7.6	Coursed rubble masonry (first sort) with :		
	7.6.1 Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.750
7.7	Coursed rubble masonry (second sort) with :		
	7.7.1 Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	0.750
<b>ASHLAR MASONRY</b>			
7.12	Stone work in plain ashlar in cement mortar (1:6) including pointing with white cement mortar (1:2).	cum	0.54
7.13& 7.14	Stone work plain ashlar in arches/domes in cement mortar (1:3) including pointing with white cement mortar (1:2).	cum	1.07
7.15	Stone work ashlar punched in cement mortar 1:6) including pointing with white cement mortar (1:2).	cum	0.54
<b>SUNK, MOULDED, CARVED ASHLAR MASONRY</b>			
7.20	Stone work sunk and / or moulded including pointing with white cement mortar (1:2).	cum	0.54
<b>MISCELLANEOUS STONE WORK</b>			
7.23	Stone work (machine cut edges) for wall lining etc. (veneer work) in cement mortar (1:3) including pointing in white cement mortar (1:2).	100 sqm	9.18 + 1.56*
7.25	P/F stainless steel cramps in stone wall lining in cement mortar (1:2).	kg	0.07
7.26	P/F stone dowels 10x5x2.50 cm in cement mortar (1:2) .	each	0.007
7.27	P/F copper pins 7.5 cm long 6 mm diameter in stone wall lining in cement mortar (1:2).	each	0.007
7.28	P/F sloping chajja of stone 40 mm thick and upto 80 cm wide in cement mortar (1:4) i/c pointing in white cement mortar (1:2).	100 sqm	5.59
7.29	P/F horizontal chajja of stone 40 mm thick and upto 80 cm projection in cement mortar (1:4) i/c pointing in white cement mortar (1:2).	100 sqm	4.94 + 0.03*
7.30	P/F 30 mm red sand stone sun-shade with cement mortar 1:4 including finishing complete.	100 sqm	2.19
7.31	Providing and fixing red sand stone brackets 55x22.5x45cm.	100nos	3.02

COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 7.0 STONE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
7.32	Stone work, plain in copings, cornices, string courses etc. in Cement mortar 1:6 including pointing with white cement mortar (1:2).	cum	0.54
7.36	Wall lining butch work with Dholpur stone 40 mm thick, in cement mortar (1:3) including ruled pointing in cement mortar (1:2).	100 sqm	15.50 + 1.70*
7.37	Stone work ( machine cut edges) for wall lining with grout of 12 mm thick in cement mortar (1:3) and jointed with Cement mortar (1:2).	100 sqm	13.744
7.38	Stone tile work for wall lining with 12 mm thick bed in cement mortar (1:3).	sqm	10.44 + 1.70*
<b>STONE WORK IN DRY CLADDING</b>			
7.41	P/F structural steel frame (for dry stone cladding) embedded in brick wall with cement concrete block (1:2:4)	100kg	1.05

\* White cement

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 8.0 MARBLE & GRANITE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
8.1	Marble work 18 mm thick for wall lining in cement mortar 1:3 100 including pointing with white cement mortar 1:2.	sqm	8.67 + 1.70*
8.2	P/F 18mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters 100 etc. laid over 20mm thick base cement mortar 1:4.	sqm	9.12
8.4	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy 100 resin based adhesive including cleaning etc. complete.	metre	1.27
8.7	P/F cramps in RCC/ CC backing with cement mortar 1:2 .		
8.7.1	Gunmetal cramps	kg	0.0635
8.7.2	Stainless steel cramps	kg	0.0701
8.9	Stone tile work for wall lining over 12mm thick bed of cement mortar (1:3) and cement slurry @ 3.3 kg/sqm including pointing 100 in white cement complete.	sqm	10.44 + 1.90*
8.11	P/F machine cut mirror/edge polished	100 sqm.	8.16 + 3.30*
8.12	P/L flamed finish granite stone flooring	100 sqm.	13.50
8.13	P/L polished granite stone .....	100 sqm.	13.50

\* White cement

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 9.0 WOOD AND P.V.C. WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>MISCELLANEOUS - WOOD WORK</b>			
9.32	P/F 50x50x50 mm 2nd class teak wood plugs in cement mortar 1:3.	100 nos.	0.01
9.34	P/F 2nd class teak wood plain lining with wooden plugs.	100 sqm	0.055
9.46	P/F curtain rods of 1.25 mm thick chromium plated brass brackets with wooden plugs, etc.	100 metre	0.01
9.47	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets.	100 metre	0.01
9.53	Providing 40x5 mm flat iron hold fast 40 cm long with cement concrete block 30x10x15cm 1:3:6 mix.	100 nos	1.10

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 10.0 MARBLE & GRANITE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
10.4	P/F 1 mm thick M.S. sheet sliding-shutters with frame.	100 sqm	0.35
10.5	P/F 1 mm thick M.S. sheet door with frame.	100 sqm	0.35
10.6	Supplying and fixing rolling shutters.	100 sqm	0.35
10.10.1 & 10.11.1	Fixing standard steel glaze door windows etc.	100 kg	0.13
10.13.1	P/F 'T' iron froms for doors windows & ventilators	100 kg	0.11
10.15	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with 15x3 mm lugs 10 cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 mix.	100 kg	0.28



## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 11.0 FLOORING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
11.1	Brick on edge flooring.		
11.1.1	1:4 (1 cement : 4 coarse sand)	sqm	0.1850
11.1.2	1:6 (1 cement : 6 coarse sand)	sqm	0.1285
11.3	Cement concrete flooring 1:2:4.		
11.3.1	40mm thick with 20mm nominal size stone aggregate	sqm	0.17
11.4	52 mm thick cement concrete flooring.	sqm	0.231
11.5	62 mm thick cement concrete flooring.	sqm	0.263
11.6	Cement plaster skirting with cement mortar (1:3).	sqm	0.14
11.7	Cement concrete pavement with C.C. (1:2:4).	cum	3.20
<b>TERRAZO FLOORING</b>			
11.9	40 mm thick marble chips flooring with under layer 34 mm thick cement concrete (1:2:4).		
11.9.1	Dark shade pigment with ordinary cement	sqm	0.1695
11.9.2	Light shade pigment with white cement	sqm	0.129+0.0405*
11.9.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	0.1492+0.0202*
11.9.4	White cement without any pigment	sqm	0.129+0.0202*
11.9.5	Light shade pigment with ordinary cement	sqm	0.1695
11.9.6	Ordinary cement without any pigment	sqm	0.1695
11.10	40 mm thick marble chips flooring with under layer 31mm thick cement concrete 1:2:4.		
11.10.1	Dark shade pigment with Ordinary cement	sqm	0.1783
11.10.2	Light shade pigment with white cement	sqm	0.1205+0.0578*
11.10.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	0.1494+0.0289*
11.10.4	White cement without any pigment	sqm	0.1205+0.0578*
11.10.5	Light shade pigment with ordinary cement	sqm	0.1783
11.10.6	Ordinary cement without any pigment	sqm	0.1783
11.11	40 mm thick marble chips flooring with under layer 28 mm thick cement concrete 1:2:4.		
11.11.1	Dark shade pigment with ordinary cement	sqm	0.1907
11.11.2	Light shade pigment with white cement	sqm	0.1097+0.081*
11.11.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	0.1502+0.0405*
11.11.4	White cement without any pigment	sqm	0.1097+0.081*

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
11.11.5	Light shade pigment with ordinary cement	sqm	0.1097
11.11.6	Ordinary cement without any pigment	sqm	0.1097
11.12	Marble chips skirting :		
11.12.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 coarse sand) :		
11.12.1.1	Dark shade pigment with ordinary cement	sqm	0.1292
11.12.1.2	Light shade pigment with white cement	sqm	0.0887+0.0405*
11.12.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement	sqm	0.109+0.0203*
11.12.1.4	White cement without any pigment	sqm	0.109+0.0405*
11.12.1.5	Light shade pigment with ordinary cement	sqm	0.1292
11.12.1.6	Ordinary cement without any pigment	sqm	0.1292
11.15	Crazy marble stone flooring.		
11.15.1	18 mm thick crazy marble stone white, black or as specified * White Cement	sqm	0.1200+0.0405*
<b>TILE FLOORING</b>			
11.16	Precast terrazo tiles 22mm thick in floors, and landings on 20mm thick bed of cement mortar (1:4).		
11.16.1	Light shade using white cement	sqm	0.0895+0.044*
11.16.2	Medium shade using 50%white cement and 50% ordinary cement	sqm	0.0917+0.0220*
11.16.3	Dark shade using ordinary cement	sqm	0.0939
11.16.4	Ordinary cement without any pigment	sqm	0.0939
11.18	Precast terrazo tiles 22 mm thick in skirting and risers of steps.		
11.18.1	Light shade using white cement.	sqm	0.0734+0.066*
11.18.2	Medium shades using 50% white cement and 50% ordinary cement.	sqm	0.1064+0.033*
11.18.3	Dark shade using ordinary cement	sqm	0.1394
11.18.4	Ordinary cement without any pigment	sqm	0.1394
11.19	Chequered terrazo tiles 22 mm thick in floors on 20 mm thick bed of cement mortar (1:4).		
11.19.1	Light shade using white cement	sqm	0.0895+0.044*
11.19.2	Medium shade using 50% white cement, 50% ordinary cement	sqm	0.0917+0.024*
11.19.3	Dark shade using ordinary cement	sqm	0.0939
11.19.4	Ordinary cement without any pigment	sqm	0.0939

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
11.20	Chequered precast cement concrete tiles 22 mm thick in foot path on 20 mm thick bed of cement mortar (1:4).		
11.20.1	Light shade using white cement	sqm	0.1291+0.066*
11.20.2	Medium shade using 50% white cement 50% Grey cement	sqm	0.1621+0.033*
11.20.3	Dark shade using ordinary cement	sqm	0.1951
11.20.4	Ordinary cement without any pigment	sqm	0.1951
11.21	Providing and fixing 10mm thick acid and or alkali resistant tiles.		
11.21.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)		
11.21.1.1	Acid and alkali resistant tile	sqm	0.0786**
11.21.2	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)		
11.21.2.1	Acid and alkali resistant tile	sqm	0.0862**
11.22	Tile work in skirting, risers of steps etc. with 8 mm thick marble tile.	sqm	0.1044
	<b>STONE FLOORING</b>		
11.23	Marble stone flooring with 18 mm thick marble stone over 20 mm thick cement mortar (1:4).	sqm	0.13512
	<b>KOTA STONE FLOORING</b>		
11.26	Kota stone slab flooring over 20 mm thick bed of cement mortar (1:4).	sqm	0.1491
11.27	Kota stone slabs 20 mm thick in risers of steps, skirting etc. laid on 12 mm (average) thick cement mortar 1:3.	sqm	0.1374
	<b>SAND STONE FLOORING</b>		
11.28	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 with joints finished flush.	sqm	0.0775
11.29	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 including pointing with cement mortar 1:2.	sqm	0.0931
11.30	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 with joints 3mm thick, side buttered with cement mortar 1:2.	sqm	0.0931
	<b>CERAMIC GLAZED TILES</b>		
11.36	P/F 1st quality ceramic glazed wall tiles over 12 mm thick bed of cement Mortar (1:3).	sqm	0.1044
11.37	P/L ceramic glazed floor tiles laid on 20 mm thick Cement Mortar (1:4).	sqm	0.1242

COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 11.0 FLOORING

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of cement per unit quantity of work (Quintals)</b>
11.38	P/L ceramic glazed floor tiles laid on 20mm thick bed of Cement Mortar (1:4).	sqm	0.1242
11.39& 11.40	P/L rectified Glazed Ceramic floor tiles laid on 20mm thick cement mortar (1:4).	sqm	0.1242
<b>VITRIFIED FLOOR TILES</b>			
11.41	P/L vitrified floor tile laid on 20mm thick cement mortar (1:4).	sqm	0.1242
11.44	Crazy ceramic tile flooring.	sqm	0.0646
11.46	P/L vitrified tile in skirting in cement mortar (1:3).	sqm	0.088
11.51	P/L Machine cut, Mirror polished, Italian Marble stone flooring	Sqm.	0.085 + 0.05*
11.52	P/L Machine cut Mirror polished Marble stone flooring	Sqm.	0.085 + 0.05*

\* White cement

\*\* Acid alkali resistant cement.

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 12.0 ROOFING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
12.16	10 cm thick mud phaska with flat tile bricks grouted with cement mortar (1:3).	100 sqm	3.11
12.17	10cm thick mud phaska with machine moulded tile bricks grouted with cement mortar (1:3).	100 sqm	3.11
12.19	Providing and laying brick tiles over mumty roofs grouted with cement mortar (1:3).	100 sqm	9.13
12.20	Providing and laying pressed clay tiles on roofs jointed with cement mortar (1:4).	100 sqm	9.92
12.21	Providing gola 75x75 mm in cement concrete (1:2:4).	metre	0.031
12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete (1:2:4).	each	0.06
12.23	Providing sand stone slab for roofing and laying cement mortar (1 : 4).	100 sqm	0.74
12.38	Providing and fixing M.S. holder bat clamps in cement concrete blocks 10x10x10cm of 1:2:4 mix.	each	0.005
12.55	P/F heat resistant tile on roof with cement mortar (1:4) and filling joints with white cement marble mix.	sqm	0.1367

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 13.0 FINISHING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>CEMENT PLASTER (IN FINE SAND)</b>			
13.1	12 mm cement plaster:		
13.1.1	1:4 (1 cement : 4 fine sand)	100 sqm	5.47
13.1.2	1:6 (1 cement : 6 fine sand)	100 sqm	3.60
13.2	15 mm cement plaster:		
13.2.1	1:4 (1 cement : 4 fine sand)	100 sqm	6.54
13.2.2	1:6 (1 cement : 6 fine sand)	100 sqm	4.30
13.3	20 mm cement plaster :		
13.3.1	1:4 (1 cement : 4 fine sand)	100 sqm	8.51
13.3.2	1:6 (1 cement : 6 fine sand)	100 sqm	5.60
<b>CEMENT PLASTER (IN COARSE SAND)</b>			
13.4	12 mm cement plaster :		
13.4.1	1:4 (1 cement : 4 coarse sand)	100 sqm	5.47
13.4.2	1:6 (1 cement : 6 coarse sand)	100 sqm	3.60
13.5	15 mm cement plaster :		
13.5.1	1:4 (1 cement : 4 coarse sand)	100 sqm	6.54
13.5.2	1:6 (1 cement : 6 coarse sand)	100 sqm	4.30
13.6	20 mm cement plaster :		
13.6.1	1:4 (1 cement : 4 coarse sand)	100 sqm	8.51
13.6.2	1:6 (1 cement : 6 coarse sand)	100 sqm	5.60
<b>CEMENT PLASTER WITH A FLOATING COAT OF NEAT CEMENT</b>			
13.7	12 mm cement plaster finished with a floating coat of neat cement :		
13.7.1	1:3 (1 cement : 3 fine sand)	100 sqm	9.54
13.7.2	1:4 (1 cement : 4 fine sand)	100 sqm	7.67
13.8	15 mm cement plaster finished with a floating coat of neat cement :		
13.8.1	1:3 (1 cement : 3 fine sand)	100 sqm	10.97
13.8.2	1:4 (1 cement : 4 fine sand)	100 sqm	8.74
13.9	Cement plaster (1:3) finished with a floating coat of neat cement.		
13.9.1	12 mm Cement Plaster	100 sqm	9.54
13.9.2	20 mm Cement Plaster	100 sqm	13.62

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
13.10	15 mm cement plaster (1:3) finished with a floating coat of neat cement.	100 sqm	10.97
	<b>CEMENT PLASTER IN TWO COATS</b>		
13.11	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 finished with a top layer 6mm thick cement plaster 1:6.	100 sqm	6.26
13.12	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 and a top layer 6mm thick cement plaster (1:3).	100 sqm	8.13
13.13	12 mm cement plaster 1:2 (1 cement : 2 stone dust).	100 sqm	9.79
13.14	15 mm cement plaster 1:2 (1 cement : 2 stone dust).	100 sqm	11.70
13.15	20 mm cement plaster 1:2 (1 cement : 2 stone dust).	100 sqm	15.23
	<b>6 MM CEMENT PLASTER</b>		
13.16	6 mm cement plaster of mix :		
	13.16.1 1:3 (1 cement : 3 fine sand)	100 sqm	3.67
13.17	6 mm cement plaster (1:3) finished with a floating coat of neat cement.	100 sqm	5.87
13.18	Neat cement punning	100 sqm	2.20
	<b>ROUGH CAST PLASTER</b>		
13.19	Rough cast plaster in two layers, under layer 12 mm cement plaster (1:4) and top layer 10mm cement plaster (1:3).	100 sqm	11.59
	<b>PEBBLE DASH PLASTER</b>		
13.20	Pebble dash plaster in two layers, under layer 12mm cement plaster 1:4 and top layer 10mm cement plaster with cement mortar (1:3).	100 sqm	11.59
	<b>PLAIN CEMENT MORTAR BANDS</b>		
13.28	12 mm thick plain cement mortar bands in cement mortar (1:4) : (Flush /Sunk / Raised / Moulded Band).	100 metre 1cm wide	0.053
13.29	18 mm thick plain cement mortar band in cement mortar (1:4).	100 metre 1cm wide	0.076
13.30	18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5, top layer 6mm thick with cement mortar (1:4).	100 metre 1cm wide	0.07
	<b>POINTING OF BRICK WORK</b>		
13.31	Pointing on brick work with cement mortar (1:3) :		
	13.31.1 Flush / Ruled/ Struck or weathered pointing	100 sqm	1.53
	13.31.2 Raised and cut pointing	100 sqm	2.04

COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 13.0 FINISHING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>POINTING ON TILE BRICK WORK</b>			
13.32	Pointing on tile brick work with cement mortar (1:3).		
13.32.1	Flush/ Ruled/ Struck or weathered pointing	100 sqm	2.35
<b>POINTING ON STONE WORK</b>			
13.33	Pointing on stone work with cement mortar (1:3).		
13.33.1	Flush/ Ruled pointing	100 sqm	1.17
13.33.2	Raised and cut pointing	100 sqm	2.35
13.34	Raised and cut pointing on stone work in white cement mortar (1:3).	100 sqm	2.35*
13.35	Pointing on stone slab ceiling with cement mortar (1:2).	100 sqm	1.02
13.72	Washed stone grit plaster on exterior walls in two layers, under layer 12mm cement plaster (1:4), top layer 15mm cement plaster 1:1/2:2.	100 sqm	17.472
	<b>Note:</b> - cement consumption for pointing is same for modular & non modular bricks.		

\* White cement



## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 14.0 REPAIR TO BUILDING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
14.1	Repairs to plaster of thickness 12 mm to 20 mm in patches with cement mortar 1:4.	100 sqm	6.95
14.2	Fixing chowkhats in existing opening with hold fasts in cement concrete blocks with cement concrete 1:3:6.		
14.2.1	Door chowkhats	each	0.12
14.2.2	Window chowkhats	each	0.06
14.2.3	Clerestory window chowkhats	each	0.03
14.12	Providing and fixing 16 mm M.S. Fan clamps in existing R.C.C. slab.	each	0.016
14.13	Regrading terracing of mud phaska to proper slope.	100 sqm	3.11
14.14	Replacing sand stone slabs in roofing in cement mortar 1:4.	100 sqm	0.78
14.15	Renewing wooden battens in roofs & making good the holes in walls.	cum	0.36
14.16	Renewing wooden beams in roofs & making good the holes in walls.	cum	0.13
14.18	Flush pointing with cement mortar 1:3 for flat tile bricks on top of mud phaska.	100 sqm	0.76

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 16.0 ROAD WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
<b>FENCING</b>			
16.23	P/F boundary stone including finishing smooth with cement mortar (1:3).	each	0.082
16.24	P/F precast R.C.C. kilometre stone including finishing smooth in cement mortar (1:3).		
16.24.1	35x111x25 cm size	each	0.37
16.24.2	50x152.5x25 cm size	each	0.698
16.24.3	35x93.5x18 cm size	each	0.23
<b>CONCRETE PAVEMENT</b>			
16.42	Cement concrete (1:2:4) in pavements.	cum	3.20
16.43	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix.	cum	3.40
<b>MISCELLANEOUS</b>			
16.49	Making bell mouth opening including providing cement concrete (1:3:6) & plastering with cement mortar (1:3).	10 nos	6.60
16.52	Providing and fixing precast lime fly ash concrete blocks including finishing with 10mm thick cement mortar (1:3), in foot paths.	sqm	0.05
16.63	P/L kerb channel 30cm wide and 50mm thick of cement concrete (1:3:6).	metre	0.11
16.67	Providing and fixing factory made RCC pavement slab of M-30 grade in footpath over a bed of 20mm average thick cement mortar (1:5).	100 sqm	7.75
16.69	Providing and laying factory made kerb stone of M-25 grade jointed with cement mortar (1:3).	cum	0.05
16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete.	cum	3.30
16.80	Dry lean cement concrete sub base.	cum	1.50
16.85	Laying old kerb stones, jointed with cement mortar (1:3).	100 metre	0.3723
16.86	P/L gang saw cut 18 mm thick, morror polished	sqm.	0.09
16.87	P/L gang saw cut 30 mm thick mirror polished	sqm.	0.09
16.88	P/L Matt finished vitrified tile of size	sqm.	0.12
16.89	P/L Matt finished vitrified tile of size	sqm.	0.12
16.90	P/L tactile tile	sqm.	0.12
16.92	P/F 10x10x7.5 cm. granite stone block	sqm.	1.85
16.93	Providing and Placing in position 100mm thick precast RCC covers on drain of footpath	sqm.	0.352

COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 16.0 ROAD WORK

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 17.0 SANITARY INSTALLATIONS

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
17.1/17.2/			
17.3	Fixing Indian European type W.C. pan.	each	0.05
17.4	Fixing white vitreous china urinal basin :		
17.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	each	0.025
17.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern	each	0.04
17.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern	each	0.067
17.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern	each	0.095
17.5	Fixing white vitreous china flat back half stall urinal :		
17.5.1	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern	each	0.051
17.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern	each	0.102
17.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern	each	0.153
17.5.4	Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern	each	0.203
17.6	Fixing one piece construction white vitreous china squatting plate :		
17.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern	each	0.051
17.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern	each	0.102
17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern	each	0.153
17.6.4	Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern	each	0.203
17.7	Fixing wash basin with C.I. brackets.	each	0.025
17.8	Fixing white vitreous china pedestal for wash basin.	each	0.016*
17.9	Fixing kitchen sink with C.I. brackets.	each	0.025
17.10	Fixing kitchen sink with C.I. brackets.	each	0.025
17.11	Fixing kitchen sink with C.I. brackets.	each	0.025
17.12	Fixing draining board with C.I. brackets.	each	0.014

*COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 17.0 SANITARY INSTALLATIONS*

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of cement per unit quantity of work (Quintals)</b>
17.13	Fixing White vitreous china water closet squatting pan.	each	0.025
17.17	Fixing a pair of white vitreous china foot rests.	each	0.025
17.23	Fixing white vitreous china flat urinal basin.	each	0.01
17.24	Fixing white vitreous china squatting plate urinal.	each	0.02
17.25	Fixing white vitreous china wash basin.	each	0.015
17.26	Fixing kitchen sink.	each	0.015
17.27	Fixing kitchen sink.	each	0.015
17.37	Providing and fixing M.S. holder-bat clamps.	each	0.005
17.59	Providing and fixing M.S. stays and clamps.	each	0.005
17.60	Providing and fixing trap of self-cleansing design.	each	0.025
17.61	Cutting chases in brick masonry walls for sand cast iron/centrifugally cast (spun) iron pipes and making good the same with C.C.(1:3:6).		
17.61.1	100 mm dia	100 metre	5.40
17.61.2	75 mm dia	100 metre	3.70
17.61.3	50 mm dia	100 metre	1.87

\* White Cement.

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 18.0 WATER SUPPLY

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
18.1/18.4/	Providing and fixing G.I./ PE-AL-PE/ PP-R pipes.		
18.7/18.10	<b>Internal work - Exposed on wall</b>		
18.10.1	15 mm dia nominal bore	100 metre	0.05
18.10.2	20 mm dia nominal bore	100 metre	0.06
18.10.3	25 mm dia nominal bore	100 metre	0.07
18.10.4	32 mm dia nominal bore	100 metre	0.075
18.10.5	40 mm dia nominal bore	100 metre	0.08
18.10.6	50 mm dia nominal bore	100 metre	0.08
18.2/18.5/ 18.8/18.11	P/F concealed pipes.	100 metre	0.88
18.32	Constructing masonry Chamber 30x30x50 cm, for stop cock.	each	0.26
18.33	Constructing masonry Chamber 60x60x75 cm, for sluice valve.	each	1.44
18.34	Constructing masonry Chamber 90x90x100 cm, for sluice valve.	each	2.48
18.35	Constructing masonry Chamber 120x120x100 cm, for sluice valve.	each	3.50
18.36	Constructing masonry Chamber 60x60x75 cm, for fire hydrants.	each	1.30
18.37	Constructing masonry Chamber 60x45x50 cm, for water meter.	each	1.34
18.76	Cutting holes up to 30x30 cm in walls including making good the same.	100 nos.	2.92
18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs and repairing the hole after insertion of drain pipes etc. with cement concrete (1:2:4).	100 nos.	0.70
18.78	Making chases up to 7.5x7.5 cm in walls i/c finishing.	100 metre	0.88
18.79	Making hole up to 20x20 cm and embedding pipes up to 150 mm diameter in masonry and filling with cement concrete (1:3:6).	100 metre	4.90

# 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

## 19.0 DRAINAGE

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
19.1	Jointing glazed stoneware pipes with stiff mixture of cement mortar in the proportion of (1:1).		
19.1.1	100 mm diameter	100 metre	2.17
19.1.2	150 mm diameter	100 metre	3.23
19.1.3	200 mm diameter	100 metre	4.33
19.1.5	250 mm diameter	100 metre	5.40
19.1.6	300 mm diameter	100 metre	6.47
19.2	Laying cement concrete (1:5:10) around S.W. pipes:		
19.2.1	100 mm diameter S.W. pipe	100 metre	19.24
19.2.2	150 mm diameter S.W. pipe	100 metre	23.53
19.2.3	200 mm diameter S.W. pipe	100 metre	27.43
19.2.5	250 mm diameter S.W. pipe	100 metre	31.72
19.3	Laying cement concrete (1:5:10) upto haunches of S.W. pipes:		
19.3.1	100 mm diameter S.W. pipe	100 metre	9.14
19.3.2	150 mm diameter S.W. pipe	100 metre	14.82
19.3.3	200 mm diameter S.W. pipe	100 metre	17.42
19.3.5	250 mm diameter S.W. pipe	100 metre	20.28
19.3.6	300 mm diameter S.W. pipe	100 metre	23.40
19.4	Providing and fixing square-mouth S.W. gully trap :		
19.4.1	100x100 mm size P type	each	0.27
19.4.2	150 x 100 mm size P type.	each	0.26
19.4.3	180x150 mm size P type	each	0.25
19.6 P/L	NP2 class R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of (1:2):		
19.6.1	100 mm dia. R.C.C. pipe	100 metre	0.50
19.6.2	150 mm dia. R.C.C. pipe	100 metre	0.60
19.6.3	250 mm dia. R.C.C. pipe	100 metre	0.90
19.6.4	300 mm dia. R.C.C. pipe	100 metre	1.10
19.6.5	450 mm dia. R.C.C. pipe	100 metre	2.40
19.6.6	500 mm dia. R.C.C. pipe	100 metre	2.60
19.6.7	600 mm dia. R.C.C. pipe	100 metre	3.20
19.6.8	700 mm dia. R.C.C. pipe	100 metre	3.70
19.6.9	800 mm dia. R.C.C. pipe	100 metre	4.20

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
19.6.10	900 mm dia. R.C.C. pipe	100 metre	4.90
19.6.11	1000 mm dia. R.C.C. pipe	100 metre	5.50
19.6.12	1100 mm dia. R.C.C. pipe	100 metre	6.10
19.6.13	1200 mm dia. R.C.C. pipe	100 metre	6.80
19.7	Constructing brick masonry manhole in cement mortar (1:4).		
19.7.1	Inside size 90x80 cm and 45 cm deep	each	2.92
19.7.2& 19.7.3	Inside size 120x90 cm and 90 cm.deep	each	4.73
19.8	Extra for depth for manholes		
19.8.1	Size 90x80 cm	metre	1.26
19.8.2	Size 120x90 cm	metre	1.52
19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar (1:4).		
19.9.1	0.91 m deep	each	2.75
19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) with beyond 0.91m to 1.67m	metre	1.40
19.11	Constructing brick masonry circular manhole 1.22m internal dia at bottom and 0.56m dia at top in cement mortar (1:4).		
19.11.1	1.68 m deep	each	5.39
19.12	Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m.	metre	1.43
19.13	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar (1:4).		
19.13.1	2.30 m deep	each	10.86
19.14	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m.	metre	3.11
19.15	Providing M.S. foot rests including fixing in manholes with 20x20x10 cm cement concrete blocks (1:3:6).	100 nos.	0.88
19.16	Providing orange colour safety foot rest.	100 nos	1.98
19.17	Replacement of M.S. foot rests in manholes with 20x10x10 cm C.C. blocks (1:3:6) mix.	100 nos	0.88
19.19	Providing and fixing in position precast R.C.C. manhole cover and frame.		
19.19.1 L	D- 2.5		
19.19.1.1	Rectangular shape 600x450mm internal dimensions	each	0.128
19.19.1.2	Square shape 450mm internal dimensions	each	0.096
19.19.1.3	Circular shape 450mm internal diameter	each	0.096

*COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 19.0 DRAINAGE*

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
19.19.2	M D - 10		
19.19.2.1	Square shape 450mm internal dimension	each	0.128
19.19.2.2	Circular shape 500mm internal diameter	each	0.096
19.19.3	H D - 20		
19.19.3.1	Circular shape 560 mm internal diameter	each	0.096
19.19.4	EHD - 35		
19.19.4.1	Circular shape 560 mm internal dia	each	0.096
19.21	Making connection of drain or sewer line with existing manhole and making good the walls, floors with C.C.(1:2:4) mix.		
19.21.1	For pipes 100 to 250 mm diameter	each	0.056
19.21.2	For pipes 250 to 300 mm diameter	each	0.095
19.21.3	For pipes 350 to 450 mm diameter	each	0.153
19.22	Providing sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole. :		
19.22.1	100 mm dia sand cast iron drop connection	each	0.34
19.22.2	150 mm dia sand cast iron drop connection	each	0.46
19.23	Extra for depths beyond 60 cm of sand cast iron drop connection. :		
19.23.1	For 100 mm dia. sand cast iron drop connection	metre	0.21
19.23.2	For 150 mm dia. sand cast iron drop connection	metre	0.26
19.27	Constructing brick masonry road gully chamber 50x45x 60cm in cement mortar (1:4).	each	0.93
19.28	Constructing brick masonry road gully chamber 45x45x 77.5 cm in cement mortar (1:4).	each	0.82
19.29	Constructing brick masonry road gully chamber 110x50x 77.5 cm in cement mortar (1:4).	each	1.66
19.30	Constructing brick masonry chamber for underground C.I. inspection chamber and bends in cement mortar (1:4).		
19.30.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line	each	0.90
19.30.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets	each	1.02
19.30.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets	each	1.27
19.31	Extra for depth beyond 45 cm of brick masonry chamber :		
19.31.1	For 455x610 mm size	metre	0.87
19.31.2	For 500x700 mm size	metre	0.95
19.31.3	For 600x850 mm size	metre	1.12

COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 19.0 DRAINAGE



<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of cement per unit quantity of work (Quintals)</b>
19.32	Making soak pit 2.5 m diameter 3.0 metre deep.	each	0.072
19.34	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar (1:1).		
	19.34.1 100 mm dia	each	0.013
	19.34.2 150 mm dia	each	0.019
19.35	P/L Non pressure Np-3 class		
	19:35:1 450 mm dia RCC pipe	100 Mtrs.	1.20
	19:35:2 600 mm dia R.C.C. pipe	100 mtrs.	1.60
	19:35:3 900 mm dia R.C.C. pipe	100 mtrs.	2.50
	19:35:4 1000 mm dia RCC pipe	100 mtrs.	2.80
	19:35:5 1200 mm dia RCC pipe	100 mtrs.	3.40
	19:35:6 1800 mm dia RCC pipe	100 mtrs.	4.90
19:36	P/L Non pressure Np-4 class		
	19:36:1 450 mm dia RCC pipes	100 mtrs.	1.20
	19:36:2 600 mm dia RCC pipes	100 mtrs.	1.60
	19:36:3 900 mm dia RCC pipes	100 mtrs.	2.50
	19:36:4 1000 mm dia RCC pipes	100 mtrs.	2.80
	19:36:5 1200 mm dia RCC pipes	100 mtrs.	3.40
	19:36:6 1800 mm dia RCC pipes	100 mtrs.	4.90

# 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

## 20.0 PILE WORK

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
20.1	Providing, driving and installing driven cast-in-situ reinforced cement concrete piles of grade M -25.		
20.1.1	400 mm dia piles	metre	0.414
20.1.2	450 mm dia piles	metre	0.525
20.1.3	500 mm dia piles	metre	0.648
20.1.4	550 mm dia piles	metre	0.784
20.1.5	750 mm dia piles.	metre	1.456
20.1.6	1000 mm dia piles	metre	2.590
20.1.7	1200 mm dia piles	metre	3.729
20.1.8	1500 mm dia piles	metre	5.83
20.2	Boring, providing and installing bored cast-in-situ reinforced cement concrete piles of grade M -25 by tripod and mechanical winch machine.		
20.2.3	450 mm dia piles	metre	0.525
20.2.4	500 mm dia. piles	metre	0.648
20.2.5	600 mm dia piles	metre	0.932
20.2.6	750 mm dia piles.	metre	1.456
20.2A	Boring, providing and installing bored cast-in-situ reinforced cement concrete piles of grade M -25 by crawler mounted, telescopic boom hydraulic pilling Rig.		
20.2A.1	600 mm dia piles	metre	0.932
20.2A.2	750 mm dia piles	metre	1.456
20.2A.3	1000 mm dia piles	metre	2.590
20.2A.4	1200 mm dia piles	metre	3.729
20.2A.5	1500 mm dia pile	metre	5.830
20.3	Boring, Providing and installing cast in situ single under reamed piles of grade M -25.		
20.3.1	300 mm dia piles	metre	0.257
20.3.2	400 mm dia piles	metre	0.488
20.3.3	450 mm dia piles	metre	0.629
20.3.4	550 mm dia piles	metre	0.792

<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of cement per unit quantity of work (Quintals)</b>
20.4	Extra for providing additional bulb in under reamed piles.		
20.4.1	300 mm dia piles	each	0.109
20.4.2	400 mm dia piles	each	0.208
20.4.3	450 mm dia piles	each	0.267
20.4.4	550 mm dia piles	each	0.396
20.5	Providing, driving and installing driven Pre-cast reinforced cement concrete piles of grade M -25.		
20.5.1	400 mm dia piles	metre	0.414
20.5.2	450 mm dia piles	metre	0.525
20.5.3	500 mm dia piles	metre	0.648
20.5.4	550 mm dia piles	metre	0.784
20.5.5	750 mm dia piles	metre	1.795
20.5.6	1000 mm dia piles	metre	2.590

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 22.0 WATER PROOFING

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
22.1	P/L integral cement based treatment for water proofing on horizontal surface. :		
22.1.1	Using rough kota stone	sqm	0.342
22.2	P/L integral cement based treatment for water proofing on the vertical surface. :		
22.2.1	Using rough Kota stone	sqm	0.443
22.3	P/L water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of:		
	i) Ist course of applying cement slurry @ 4.4 kg/sqm		
	ii) IInd course of 20mm cement plaster (1:3)		
	iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area		
	iv) IVth course of 400 micron thick PVC sheet	sqm	0.158
22.5	P/L water proofing treatment in sunken portion of WCs, bathroom etc.	sqm	0.0123
22.6	P/L water proofing treatment on roofs.	sqm	0.0195
22.7	P/L integral cement based water proofing treatment on roofs, balconies, terraces etc. :		
22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm	sqm	0.387
22.14	Grading roof for water proofing treatment with		
22.14.1	Cement concrete 1:2:4	cum	3.20
22.14.2	Cement mortar 1:3	cum	5.10
22.14.3	Cement mortar 1:4	cum	3.80

## 1.0 COEFFICIENTS FOR CEMENT CONSUMPTION

### 26.0 NEW TECHNOLOGIES AND MATERIALS

Code No.	Description	Unit	Quantity of cement per unit quantity of work (Quintals)
26.31.1	SBR Polymer (@10% of cement weight) modified cementitious bond coat @2.2 kg cement per sqm.	100 sqm	2.20
26.32	Providing, mixing and applying SBR polymer (of approved make) modified Cement mortar in proportion of 1:4 (1 cement: 4 graded coarse sand with polymer minimum 2% by wt. of cement used) .		
26.32.1	12 mm average thickness.	100 sqm	5.47
26.32.2	25 mm average thickness in 2 layers.	100 sqm	11.40
26.32.3	50 mm average thickness in 3 layers.	100 sqm	22.80
26.33	Providing, mixing and applying SBR polymer (of approved make @ minimum 2% by wt. of cement used) modified plain/reinforced cement concrete for structural members.		
26.33.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	16.50
26.33.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	24.75
26.34	Providing and laying SBR Polymer modified (of approved make @ minimum 2% by wt. of cement used) plain/reinforced concrete jacket for the structural members e.g. columns, pillars, piers, beams etc with concrete.		
26.34.1	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	16.50
26.34.2	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	24.75
26.34.3	100mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	33.00
26.35	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump.		
26.35.1	Stirrer mixed Acrylic Polymer of approved make @ 2% of weight of cement used) modified Cement slurry made with non shrink compound in concrete/RCC work	100 kg	1.00
26.35.2	Stirrer mixed SBR Polymer (of approved make) modified Cement slurry made with Shrinkage Compensating Cement in concrete/RCC work.	100 kg	1.00
26.38	"Shotcreting R.C.C. columns, beams and slabs etc. in layers with approved design mix concrete having ."		
26.38.1	25mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	10.31
26.38.2	50mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	20.63
26.38.3	75mm thick in Grade M 25 with cement content not less than 330 kg per cum	100 sqm	30.94
26.46	Providing and fixing in position, 200 mm thick factory made Expanded Polystyrene Core (EPS Core) wall panels consisting of EPS core sandwiched between two Engineered sheets of welded wire fabric mesh.....applying the layer of 50 mm thick cement mortar 1:3 {1 cement: 3 coarse sand	100 sqm	51.00
26.47	Providing and fixing in position, 230mm thick factory made Expanded Polystyrene Core (EPS Core) roof/floor panels..... applying a layer of 60-65 mm thick cement mortar 1: 3 {1 cement: 3 coarse sand..... applying 70-75 mm thick layer of cement concrete 1:1.5: 3 (1 cement :1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size).	100 sqm	58.60

*COEFFICIENTS FOR CEMENT CONSUMPTION S.H. : 26.0 NEW TECHNOLOGIES AND MATERIALS*

**COEFFICIENTS  
FOR BITUMEN  
CONSUMPTION**

## 2.0 COEFFICIENTS FOR BITUMEN CONSUMPTION

### 16.0 ROAD WORK

Code No.	Description	Unit	Quantity of bitumen per unit quantity of work (Quintals)
<b>SURFACE DRESSING</b>			
16.25	Surface dressing on new surface with paving bitumen of grade VG -10.	sqm	0.0225
16.26	Surface dressing on new surface in two coats with bitumen of grade VG -10.	sqm	0.029
16.27	Surface dressing on old surface with hot bitumen of grade VG -10.	sqm	0.0195
16.28	Surface dressing one coat on new surface :		
	16.28.1 Using bitumen emulsion	sqm	0.0195
16.29	Surface dressing one coat on old surface :		
	16.29.1 Using bitumen emulsion	sqm	0.0122
<b>PREMIX CARPET</b>			
16.30	Providing and applying tack coat with bitumen of grade VG-10 :		
	16.30.1 On W.B.M. @ 0.75 Kg / sqm	sqm	0.0075
	16.30.2 On bituminous surface @ 0.50 Kg / sqm	sqm	0.0050
16.31	Providing and applying tack coat using bitumen emulsion (Rapid Setting):		
	16.31.1.1 On W.B.M @ 0.4kg/sqm	sqm	0.0040
	16.31.1.2 On bituminous surface @ 0.25kg/sqm	sqm	0.0025
16.32	2 cm premix carpet surfacing with paving asphalt VG-10/VG-30/modified bitumen CRMB 55.	sqm	0.0144
16.33	2.5 cm premix carpet surfacing with paving asphalt VG-10/VG-30/modified bitumen CRMB 55.	sqm	0.018
16.34	2 cm premix carpet surfacing with bitumen emulsion.	sqm	0.0255*
16.35	2.5 cm premix carpet surfacing with bitumen emulsion.	sqm	0.0313*
16.36	Providing and laying Bitumen Penetration Macadam :		
	16.36. For 50mm compacted thickness with paving asphalt VG-10 @ 50 kg/10 sqm	sqm	0.05
	16.36.2 For 75 mm compacted thickness in two layers with paving asphalt VG-10 @ 68 kg/10 sqm	sqm	0.068
<b>MASTIC AND BITUMASTIC WEARING COURSE</b>			
16.37	Providing and laying bitumen mastic wearing course:		
	16.37.1 5 mm thick	sqm	0.0588
	16.37.2 40 mm thick	sqm	0.0941

COEFFICIENTS FOR BITUMEN CONSUMPTION S.H. : 16.0 ROAD WORK

Code No.	Description	Unit	Quantity of bitumen per unit quantity of work (Quintals)
16.38	2.5 cm thick bitumastic sheet with hot bitumen, paving asphalt VG-10/VG-30/modified bitumen CRMB 55.	sqm	0.0303
16.39	4 cm thick bitumastic sheet with hot bitumen, paving asphalt VG-10/VG-30/modified bitumen CRMB 55.	sqm	0.0479
	<b>SEAL COAT</b>		
16.40	P/L seal coat using 128 kg of bitumen of grade VG-10.	sqm	0.0077
16.41	P/L seal coat using 98 kg of bitumen of grade VG-10.	sqm	0.0098
16.54	P/L Dense Bituminous macadam :		
16.54.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1.1538
16.54.2	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	1.1538
16.55	Providing and laying Bituminous Macadam.		
16.55.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	0.7683
16.55.2	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	0.7683
16.56	Providing and laying Semi Dense Bituminous concrete		
16.56.1	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	100 sqm	2.8846
16.56.2	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	100 sqm	2.8846
16.57	P/L Bituminous Concrete :		
16.57.1	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100- 120 TPH capacity.	cum	1.2958

*COEFFICIENTS FOR BITUMEN CONSUMPTION S.H. : 16.0 ROAD WORK*



<b>Code No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity of bitumen per unit quantity of work (Quintals)</b>
16.57.2	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1.2958
16.57.3	40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1.2958
16.57.4	40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1.2958
16.57.5	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	1.2958
16.57.6	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) and waste plastic additive @ 8% (percentage by weight of bitumen) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	1.2958
16.57.7	40/50 mm compacted thickness with bitumen of grade PMB-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	1.2958
16.57.8	40/50 mm compacted thickness with bitumen of grade CRMB-60 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	cum	1.2958

\* Including tack coat

## 2.0 COEFFICIENTS FOR BITUMEN CONSUMPTION

### 22.0 WATER PROOFING

Code No.	Description	Unit	Quantity of bitumen per unit quantity of work (Quintals)
22.3	P/L water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like.	sqm	0.017
22.6	P/L water proofing treatment on roofs with cement slurry & fibre glass cloth.	sqm	0.0097
22.8	P/L four courses water proofing treatment with bitumen felt over roofs:		
	22.8.1 Bitumen felt (hessian base) type 3 grade I	sqm	0.029
22.9	P/L six courses water proofing treatment with bitumen felt over roofs applied hot @ 1.45, 1.20 & 1.45 for 1st, 3rd and 5th course.	sqm	0.041
22.10 & 22.11	P/L six courses water proofing treatment with bitumen felt over roofs applied hot @ 1.45, 1.20 & 1.70 for 1st, 3rd and 5th course.	sqm	0.0435
22.15	P/L in situ seven course water proofing treatment with APP (1.5 mm thick @ 2.25 kg./sqm).	sqm	0.036
22.16	P/L in situ five course water proofing treatment with APP (2.00 mm thick @ 3.00 kg./sqm).	sqm	0.024
22.17	P/L in situ seven course water proofing treatment with APP (2.00 mm thick @ 3.00 kg./sqm).	sqm	0.036
22.18	P/F APP.		
	22.18.1 2 mm (for corrugated roof sheets)	sqm	0.0035
22.19	P/L APP modified prefabricated five layer, 3 mm thick water proofing membrane. Tear strength in longitudinal and transverse direction as 60/80N.		
	22.19.1 3 mm thick	sqm	0.0035
22.20	P/L APP modified prefabricated five layer 3 mm thick water proofing membrane. Tear strength in longitudinal and transverse direction as 300/250N.		
	22.20.1 3 mm thick	sqm	0.0035