

Government of The People's Republic of Bangladesh  
Bangladesh Economic Zones Authority  
Prime Minister's Office  
Monem Business District (level-12)  
111, Bir Uttam C.R Dutta Road, Dhaka-1205  
www.beza.gov.bd

Memo No:03.07.0000.050.14.15.2020- 5000

Date:28/12/2020

## e-Tender Notice (OTM)

Tender is invited in the National e-GP system portal (<http://www.eprocure.gov.bd>) for the procurement of:

Tender ID No	Name of Work	Publication Date	Last selling date and Time	Closing and opening Date and Time
529578	Procurement of Two Desktop Smart Signage Display One DSLR Camera One Camera Lens Type-1 and One Camera Lens Type-2 for BEZA	30-12-2020 12:00	17-01-2021 17:00	18-01-2021 14:00
528974	Supply and installation of Street Light Fittings at Sabrang Tourism Park Teknaf Cox's Bazar	30-12-2020 12:00	17-01-2021 17:00	18-01-2021 14:30
531264	Construction of Barbed wire fencing at BSMSN Mirsarai Chattogram	30-12-2020 12:00	17-01-2021 17:00	18-01-2021 15:00

This is an online tender, where only e-Tenderer will be accepted in the National e-GP portal and no offline/hard copies will be accepted. To submit e-Tender, registration in the national e-GP system portal (<http://www.eprocure.gov.bd>) is required. The fees for downloading the e-tender documents from the National e-GP system portal have to be deposited on line through any registered Banks branches. Further information and guidelines are available in the National e-GP system portal and from helpdesk ([helpdesk@eprocure.gov.bd](mailto:helpdesk@eprocure.gov.bd)). The procuring entity reserves the right to accept or reject all Tenders/Proposals.

  
(Md. Mahbubur Rahman)  
Manager (Planning & Development-1)  
BEZA

### ANNEXURE-3

#### INSPECTION OF THE INSTALLATION OF OVERHEAD LINES :

For overhead lines, it shall be checked whether:

- All conductors and apparatus including live parts thereof are inaccessible;
- The types and size of supports are suitable for the overhead lines/conductors used and are in accordance with approved drawing and standards;
- Clearances from ground level to the lowest conductor of overhead lines, sag conditions, etc. are in accordance with the relevant standard;
- Where overhead lines cross the roads or cross each other or are in proximity with one another, suitable guarding is provided at road crossings and also to protect against possibility of the lines coming in contact with one another;
- Every guard wire is properly earthed;
- The type, size and suitability of the guarding arrangement provided is adequate;
- Stays are provided suitably on the overhead lines as required and are efficiently earthed or provided with suitable stay insulators of suitable voltages;
- Anticlimbing devices and danger board / caution Board notices are provided on all HT supports;
- Clearances along the route are checked and all obstructions such as trees / branches and shrubs are cleared on the route to the required distance on either side;
- Clearance between the live conductor and the earthed metal parts are adequate; and
- For the service connections tapped off from the overhead lines, cutouts of adequate capacity are provided.

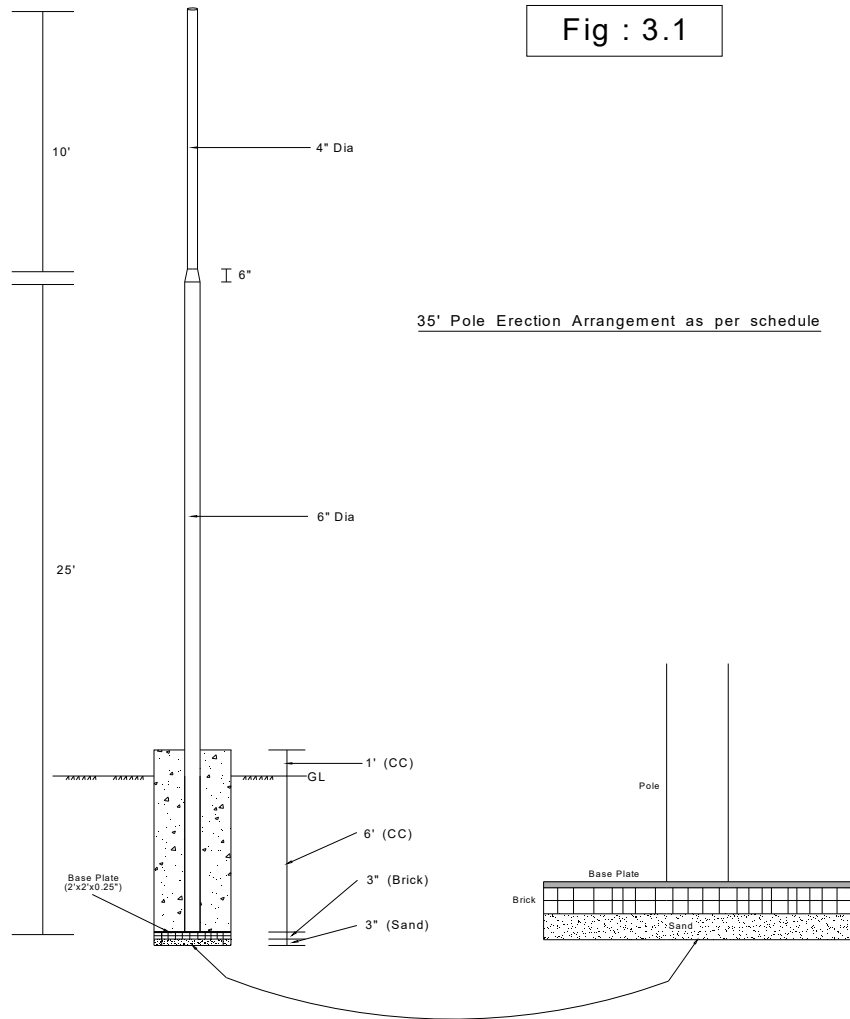
**TABLE 3.1: MINIMUM CLEARANCE IN METERS OF OVERHEAD ELECTRIC LINES FROM GROUND OR STUCTURES.**

Sl.no.	Clearance between energized line & the following in meters	Low & medium voltage up to 650 volts	High voltage Line up to 11 KV	High voltage line above 11KV up to 33 KV
1	Ground level of street			
a)	Across	5.8 m	6.10 m	6.10 m
b)	Along	5.5 m	5.80 m	6.10 m
2	Ground elsewhere			
a)	Bare conductor	4.6 m	4.60 m	5.20 m
b)	Insulated Conductor	4.00m	4.00 m	5.20 m
3	From highest & farthest point of Bldg.			
a)	Vertical	3.50 m	3.70 m	3.70 m
b)	Horizontal	1.20 m	1.20 m	2.00 m
4	Communication lines	2.13 m	2.13 m	2.13 m
	(T & T lines)			

**TABLE 3.2 : - CURRENT CARRYING CAPACITY AND WEIGHT OF HDBC WIRES**

SWG	Dia. in inch	Current carrying capacity (amps)	Length (meter per Kg)
4/0.	0.04	230	1.39
3/0.	0.37	200	1.61
2/0.	0.35	175	1.83
1/0.	0.32	150	2.12
1	0.30	130	2.47
SWG	Dia. in inch	Current carrying capacity (amps)	Length (meter per Kg)
2	0.28	117	2.92
3	0.25	103	3.5
4	0.23	91	4.12
5	0.21	78	4.94
6	0.19	68	6.02
7	0.18	58	7.17
8	0.16	52	8.67
9	0.14	44	10.7
10	0.13	37	13.55

Fig : 3.1



**Annexure: 4**

**BUSBAR TRUNKING SYSTEM :**

The low impedance prefabricated sand witch type main bus bar trunking system shall conform to IEC 439/1-2, tested Seismic standard shall be suitable for use in installation conforming to IEC 364.

The low impedance prefabricated sand witch type main bus bar trunking system shall conform to IEC 439/1-2, tested seismic standard shall be suitable for use in installation conforming to IEC 364.

**SPECIFICATION OF BBT SYSTEM :**

1. Standard : IEC 439-1 & 2, KEMA certificate

2. Housing

3. Maximum ambient temperature

4. Degree of protection

5. Color

6. Rated insulation voltage

7. Frequency

8. Rated current at 40°C

9. Minimum rated surge capacity (KA)(t=0.1s)

10. Inherent short circuit capacity (KA) (t=0.1s)

11. Rated short time with-stand current(KA) (t= 1 sec)

12. Bus bar materials

13. Bus bar cross section

14. Special features

15. Others
- : 2-piece aluminum  
(no duration till 55 °C)

: 40 Deg. C

: IP54

: Approved color

: Maximum 600 V.A.C.

: 50 Hz.

: As per schedule

: To be quoted by the bidder.

: To be quoted by the bidder.

: To be quoted by the bidder.  
Mylar from Du-point or epoxy insulated Class B 130 °C.

: Aluminum and all conductors tinned and insulated.

: To be mentioned by the bidder

: Single bolt clamping.

: Drawings to be submitted for the proposed BBT system  
with detailed information, dimension, list of materials  
as per site requirement.

Tap-off units must be designed in such a way so that the tap-off units can be fitted or removed while the system i.e. the main bus bar trunking is energized.

Circuit breakers in the Tap-off units shall be of quick make, quick break, trip-free indicating type having adjustable thermal over-current and adjustable instantaneous electro-magnetic short circuit release having the rated interrupting capacity.

All the components of the BBT i.e. main bus bar length, reduction unit, fire barrier, fixing bracket, tap-off boxes with circuit breakers, elbows, tee, feed unit, end cover, expansion unit, etc. shall be from the same manufacturer. All the joint & contact surface shall be silver plated.

The components of BBT shall be appropriately as follows but the bidder must inspect the site and supply everything to complete total system.

**BBT-1 :**

- 1600A Distribution Board Connection Unit

1600A Bends

1600A Transformer connection unit

1600A Straight length

Fire Barrier

Hanger
- :

:

:

:

:

:
- 1 No.

2 Nos.

1 No.

5.00 meter(approx.)

1 Lot.

**BBT-2 :**

:

1600A Distribution Board Connection Unit	:	1 No.
1600A Bends	:	4 Nos.
1600A Straight length	:	40.00 meter (approx.)
Fire Barrier	:	1 Lot.
Hanger/floor support	:	2 Lot.
Tap-off boxes with 200A TP (50KA) MCCB	:	7 Nos.
Tap-off boxes with 160A TP (50KA) MCCB	:	1 No.
End Cap	:	1 No.

**BBT-3 :** :

600A Distribution Board Connection Unit	:	1 No.
600A Bends	:	4 Nos.
600A Straight length	:	43.60 meter (approx.)
Fire Barrier	:	1 Lot.
Hanger/floor support	:	1 Lot.
Tap-off boxes with 160A TP (50KA) MCCB	:	1 No.
Tap-off boxes with 63A TP (50KA) MCCB	:	7 Nos.
500A End Cap	:	1 No.

**INSTALLATION:**

The BBT system shall be fixed on floor ceiling and walls with all necessary, cutting and breaking, cleaning and mending the same including cement/sand plastering and painting clamps, nuts, bolts as per the installation drawing of the manufacturer aft.er getting approval from the owner / consultants. The contractor shall supply all materials required for complete installation of the BBT system.

**EARTH RESISTANCE TEST**

- 1) Earth resistance tests shall be made on the system, separating and reconnecting each earth connection.
- 2) The electrical resistance of the earth continuity conductor together with the resistance of the earthing lead measured from the connection with the earth electrode to any other position in the completed installation shall not exceed 1 ohm.
- 3) Where more than one earthing sets are installed, the earth resistance between two sets shall be measured by means of resistance bridge instrument. The earth resistance between two sets shall not exceed 1 ohm.

**TABLE 4.1 : MINIMUM NUMBER OF SOCKET OUTLET**

Minimum number of 15 A sockets outlets

Location	Number of switch socket outlets
Bed Room	1
Living Room	1
Drawing Room	1
Dining Room	1
Kitchen Room	1
Bathr.oom	1
Verandah	1
For refrigerator	1
For air conditioner	One for each

SINGLE PHASE DISTRIBUTION BOARD (SPDB)

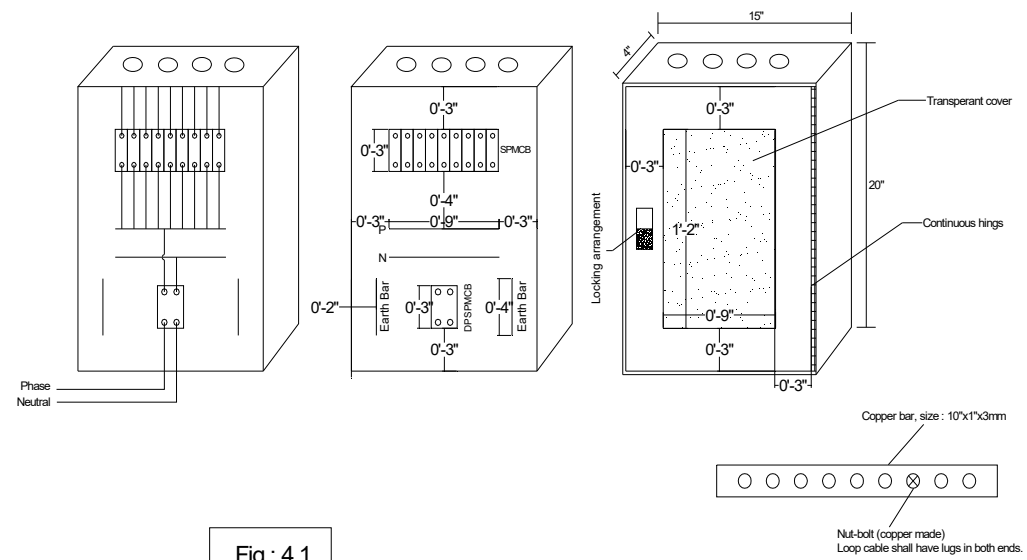


Fig : 4.1

THREE PHASE DISTRIBUTION BOARD (TPDB)

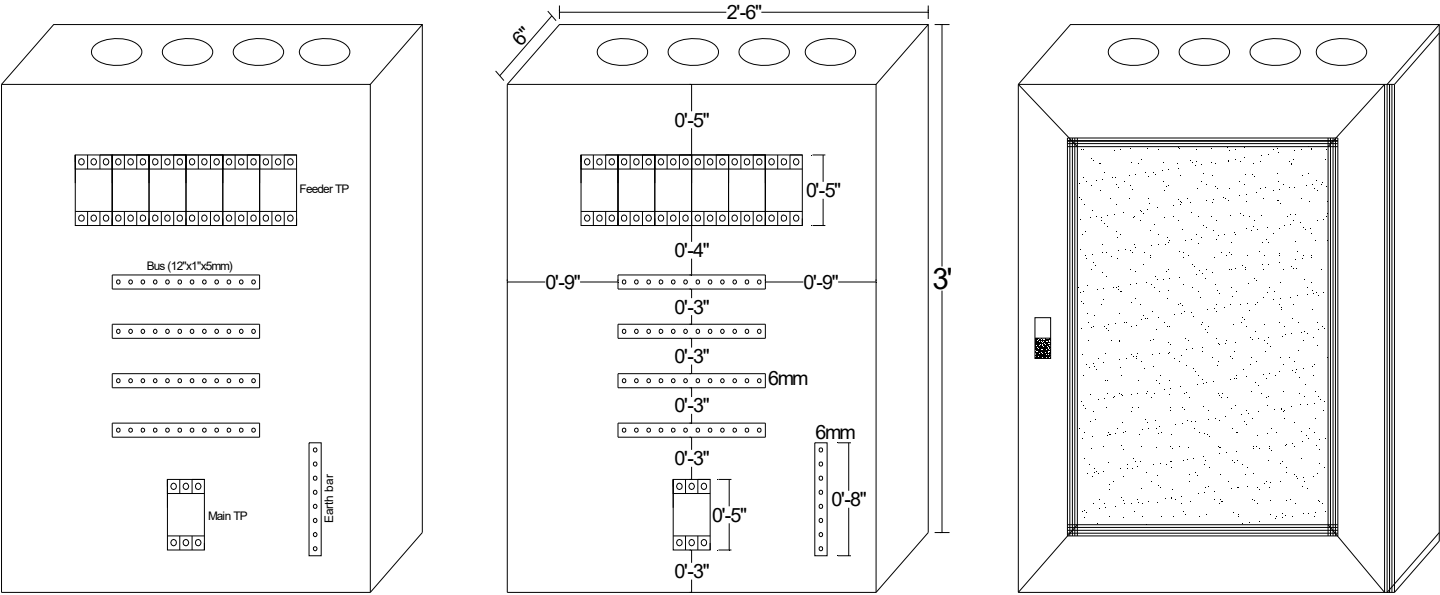
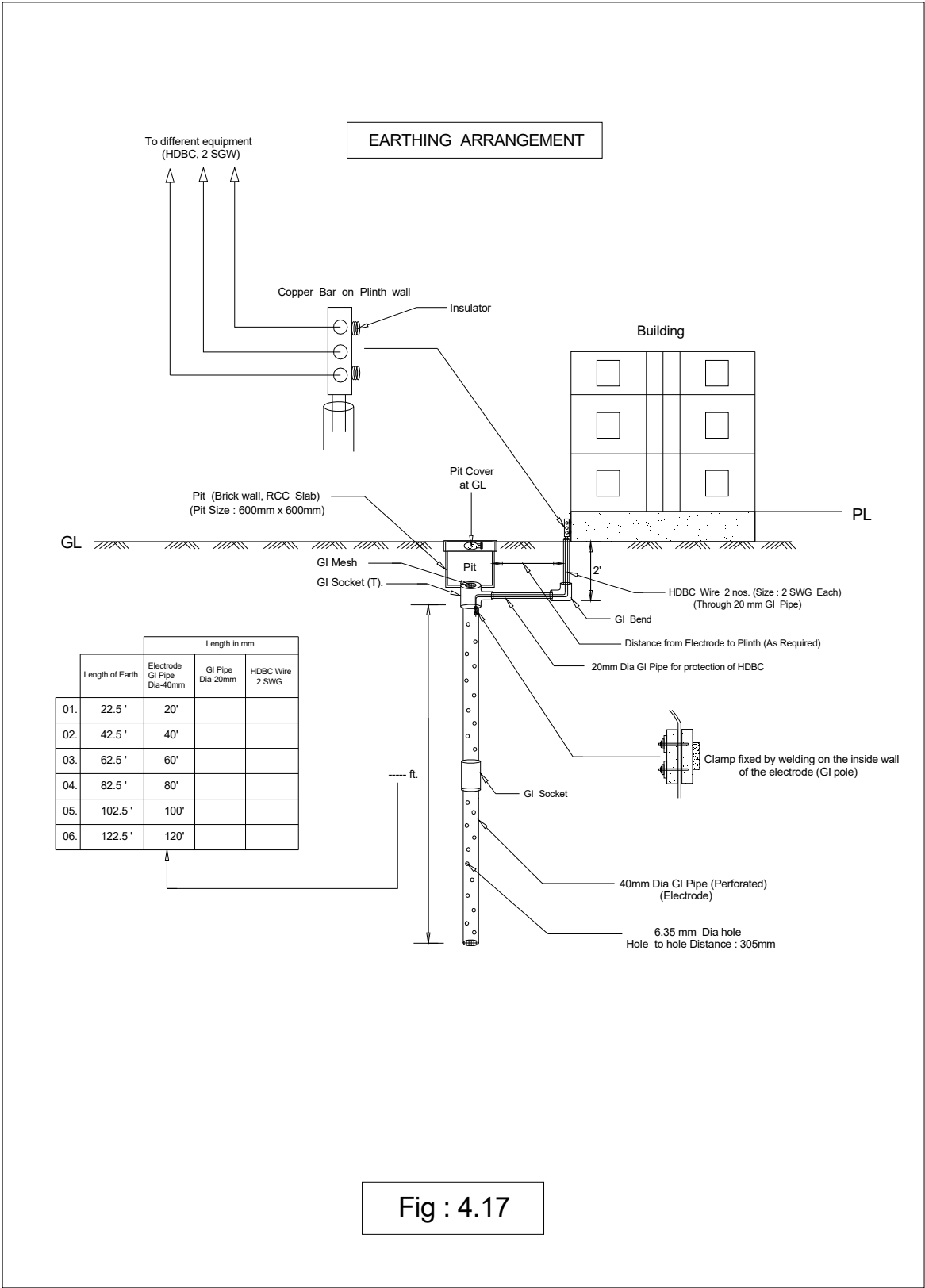


Fig : 4.2





## EARTHING ARRANGEMENT

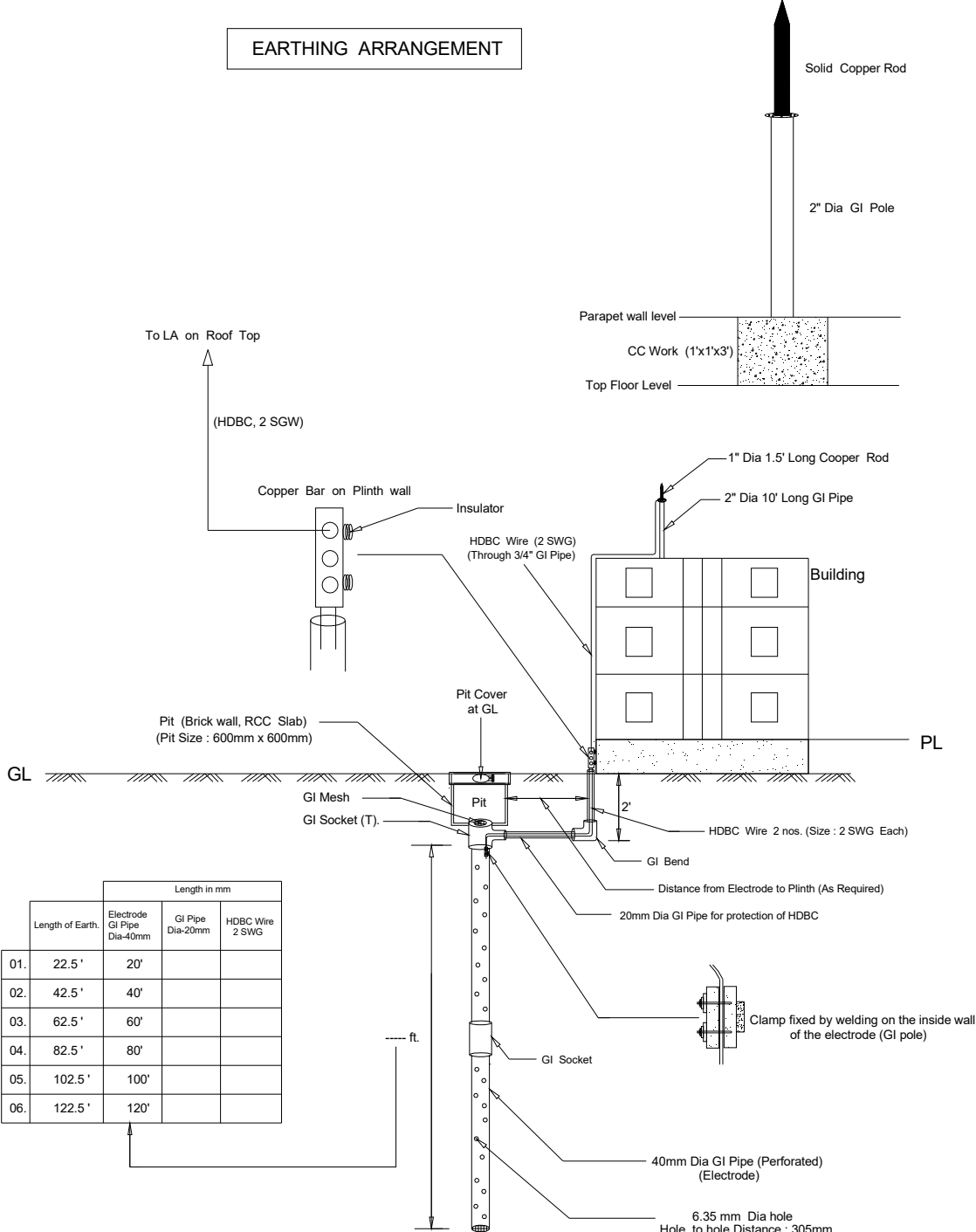
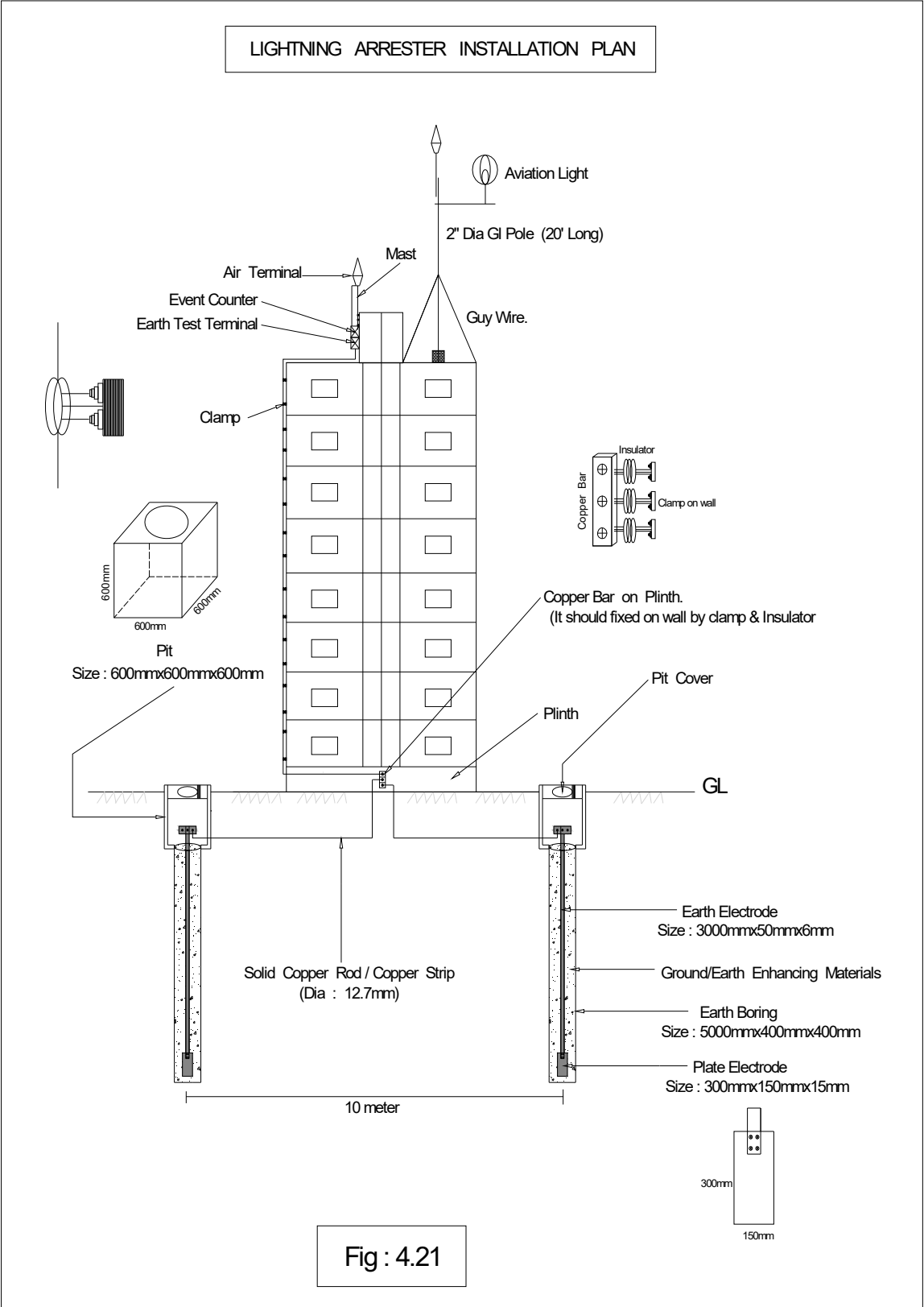


Fig : 4.19



**END OF SUB-HEAD-4**



# ANNEXURE: 6A

## COMMENDED VALUES OF ILLUMINATION FOR DIFFERENT TYPES OF BUILDING

TABLE- 6.1 : FOR RESIDENTIAL

Area or Activity	Illuminance (Lux)
Dwelling houses	
Bedroom	
General	50
Bed-head, Dressing Table	150
Kitchens	200
Dining Room (Tables)	100
Bathrooms	
General	100
Shaving make-up	300
Stairs	100
Lounges	100

TABLE 6.2 : FOR SPORTS

Type of sport	Horizontal Illuminance (Lux)	Competition
	Recreation a training	
Football	75	200-500
Handball	75	300
Gymnastics	75	150
Baseball	200	300
Tennis	200	300-500
Volleyball (indoor)	200	300
Diving	200	400
Badminton (indoor)	200	300
Hockey	200	300
Swimming	150	300
Shooting	200	200

TABLE- 6.3 : FOR EADUCATIONAL

Area or Activity	Illuminance(Lux)
Schools and college Assembly halls	
General	150
When use for examnants	300
Platforms	300
Class and lecture rooms	

TABLE- 6.4 : FOR HEALTH CARE

Area or Activity	Illuminance (Lux)
Hospitals and clinics	
Reception and waiting rooms	150
Outpatient department	150
Ward	
General	100

TABLE :- 6.6

Fluorescent lamps(220 V), Standard (Construction)

Wattage (W)	Length of lamps (mm)	Luminous flux (lm)

TABLE 6.7 : INCANDESCENT FLOOD LIGHT LAMPS  
(LUMINOUS FLUX lm)

Type	Wattage ( 220-230 V)	Luminous Flux (lm)
120 E	100 W	1050
123 E	250 W	3250

TABLE 6.8 : HIGH PRESSURE MERCURY VAPOUR LAMP (220 V)

Wattage (W)	Holder Size	Luminux flux (lm)
80	E27	2000
125	E27	6300
250	E40	13500
400	E40	23000
1000	E40	55000

TABLE 6.9 : LUMEN OUTPUT (lm) OF HALOGEN FLOOD LIGHT LAMP (PHILIPS)

Double Ended type	200W	300W	500W	750W	1000W	1500W	2000W
12094R	3200	--	--	--	--	--	--
12113R	-	5100	--	--	--	--	--
7785R	--	--	9500	--	--	--	--
12117R	--	-	--	15500	--	--	--
12013R	--	--	--	---	22000	--	--
13021R	--	--	--	--	--	33000	--
12110R	--	--	--	--	--	--	44000
Single ended type	100W	150W	250W				
	1400	2250	5000				

END OF SUB-HEAD-6A

TABL  
TABLE 6.10 : REFLECTION  
FACTORS OF SMOOTH COLOURED  
SURFACES

Al	Colour	Reflection factor
	Flat white	0.75-0.85
	Ivory	0.7-0.75
	Yellow	0.55-0.65
	Light green	0.4-0.5
	Grey	0.3-0.5
	Blue	0.25-0.35
	Red	0.15-0.2
	Dark brown	0.1-0.15
Book	Buff	0.6-0.7
Cata	Light tan	0.45-0.55
Mt	galleries	
	Museums	
	General	150
	Displays	Special lighting
	Art galleries	
	General	100
	Paintings	200