झारखण्ड सरकार

Inspection Procedure For Obtaining Occupancy Certificate For All Authorities Who Issue Occupancy Certificate

At all Urban Local Bodies, Industrial Authorities, Development authorities, Mineral Area Development Authority (MADA), inspection at construction site for obtaining occupancy certificate is one of mandatory step which need to be followed as per under section 14 in Jharkhand Building Bye-Laws 2016 (JBBL 2016).

After availing the construction permit, construction should be completed within 3 years form the date such permission if built up area less than 10,000 sq m and 5 years if built up area more than 10,000 sq m.

Inspection category

There are 4 categories inspections have been mentioned in JBBL 2016. These 4 categories inspections have been linked to risk categories of building. The following table has exhibited the relationship between inspection category and risk category of building.

Name of Inspection	Risk Category of Building			Inspection Check list
	Low	Medium	High	
Inspection	Mandatory	Mandatory	Mandatory	Annexure - V
Third Party inspection cum certification	Optional	Mandatory	Mandatory	Annexure – IX, X
Joint Inspection	Optional	Mandatory	Mandatory	-
Surprise Inspection		Optional	Optional	Annexure - V

As per above table, inspection is compulsory for all categories of building. Joint inspection and third party inspection cum certification are mandatory to medium and high risk category of building. Surprise inspection is based on complaint received and observation by concerned authority.

Periodic report of Construction

In case of high rise building the builder/ owner/ applicant shall submit a periodic progress report after plinth level and each roof slab casting in Form XI to authority.

Third Party Inspection and Certification

The accredited architects/engineers shall be authorized to do inspection as third party inspection of any building under construction or completed. The concerned accredited architects / engineers shall not be anyway associated to the project concerned. They shall issue certificate regarding construction quality/structural safety norms as well as construction is going on or completed as per sanctioned drawings. The checklist used by third party accredited architect/ civil engineer for structural safety has been provided in Annexure – IX. The checklist for construction quality inspection has been given in Annexure – X.

Joint Inspection

Joint inspection will be done by concerned ULB's Authority, Fire Service Department, Airport Authority and Environment authority as and when required. Applicant applies for individual NOC to respective department for availing NOC / relevant authority to carry out joint inspection. The authority will intimate date and tine inform the

same to applicant to present at site on specified date and time. A team of authority shall jointly come and inspect and issue NOC certificates to applicant after inspection.

Surprise inspection

Surprise inspection on the basic of complaint or otherwise only be done by the prior permission of EO/Special Officer/MC/MD/VC of ULBs/Authorities

Inspection after construction

The applicant will submit the notice of completion to the Authority that the building has been completed in all respects as per the approved plan and provision of the Byelaws. The said notice shall be accompanied by the following documents:

- Three copies of as built building plans
- A fee of Rs. 1000/-.
- Copy of approved plan and approval letter as or case may be approval letter.
- Certificate of installation of fire safety appliances by the nominated authority/ agency wherever applicable.
- Evidence to the effect of all public utility services, and in particular, sewerage, drainage, water supply, and electricity have been linked to the main public utility system.
- A certificate obtained from structural Engineer certifying the structural safety and stability of the building.
- The deviations, if any, shall also be brought to the notice of the Authority (with relevant documents)

The team of officials shall visit the site within 15 days after receiving of Completion Certificate in proper manner and occupancy certificate shall be issued after inspection. The team will verify the following facts mentioned in occupancy checklist (Annexure - XI) along with construction quality checklist / testing (Annexure – X)

Grade A Accredited architect may also issue occupancy certificate after being fully satisfied regarding compliance of all provisions of Building Bye-law and others related acts.

Inspection Procedure for obtaining construction permit and occupancy Certificate

Registered Architect / RTP (Registered Technical Personnel) will invite the authority for inspection

Risk level of Building define the path of number of inspections

Yes

High Risk

Junior engineer / Assistant Engineer / other concerned technical personnel visit the site for inspection after completion of plinth level and each roof of slab

(Powered by: U/S 13(1), 14(4), 3(56) in JBBL 2016. Checklist – Annexure - V

Accredited Architect / Civil engineer visits the site for inspection during the construction and at the stage of completion of construciton for structural safety and construction quality

(Powered by: U/S 15, 14(6), in JBBL 2016. Checklist – Annexure – IX, X

ULB's Authority, Fire Service Department, Airport Authority and Environment authority shall jointly come and inspect and issue NOC certificates to applicant after inspection at the stage of completion of construction

(Powered by: U/S 14(3), in JBBL 2016.

Owner / builder / applicant/registered architect / registered engineer have been powered to issue completion certificate after completion of above inspection with positive note.

(Powered by: U/S 18(1), in JBBL 2016.

Authority / A grade Accredited architect have been powered to issue occupancy certificate after availing of completion certificate and completion of inspection with positive note

(Powered by: U/S 19 , 19(11), in JBBL 2016. Checklist – Annexure-XI

Yes

Medium Risk

Junior engineer / Assistant Engineer / other concerned technical personnel visit the site for inspection after completion of plinth level and each roof of slab

(Powered by: U/S 13(1), 14(4), 3(56) in JBBL 2016. Checklist – Annexure - V

Accredited Architect / Civil engineer visits the site for inspection during the construction and at the stage of completion of construciton for structural safety and construction quality

(Powered by: U/S 15, 14(6), in JBBL 2016. Checklist – Annexure – IX, X

ULB's Authority, Fire Service Department, Airport Authority and Environment authority shall jointly come and inspect and issue NOC certificates to applicant after inspection at the stage of completion of construction

(Powered by: U/S 14(3), in JBBL 2016.

Owner / builder / applicant/registered architect / registered engineer have been powered to issue completion certificate after completion of above inspection with positive note.

(Powered by: U/S 18(1), in JBBL 2016.

Authority / A grade Accredited architect have been powered to issue occupancy certificate after availing of completion certificate and completion of inspection with positive note

(Powered by: U/S 19 , 19(11), in JBBL 2016. Checklist – Annexure-XI

Yes

Low Risk

Junior engineer / Assistant Engineer / other concerned technical personnel visit the site for inspection at the stage of completion

(Powered by: U/S 13(1), 14(4), 3(56) in JBBL 2016. Checklist – Annexure - V

Owner / builder / applicant/registered architect / registered engineer have been powered to issue completion certificate after completion of above inspection with positive note.

(Powered by: U/S 18(1), in JBBL 2016.

Authority / A grade Accredited architect have been powered to issue occupancy certificate after availing of completion certificate and completion of inspection with positive note

(Powered by: U/S 19 , 19(11), in JBBL 2016. Checklist – Annexure-XI

FORM-XI

PERODIC PROGRESS REPORT
(To be submitted by the Empanelled Structure/Architect/Engineer)
BYE LAWS NO.-12 (2)

From.

……
……
……
……

To,

……..……..
…….
…….
……

Ref ……..Authority approval letter No……Dated……

Madam/Sir,

I/we hereby certify that the construction of the building up to plinth level/ground floor roof slab level/ first floor roof slab level/second floor roof slab level……..of the building with respect of plot No (CS) ……..Plot No (MSP)……..Khata No……. Holding No……. Village……..…Mohalla……..../Ward No……..of ……..…….. Municipal Corporations/ Municipal Council/ Nagar Panchayats/ Metropolitan area/ Planning Area under…….Planning Authority/Gram Panchayat areas covered under……. Development Plan/ Planning Authorities/ or planning scheme notified under Jharkhand Municipal Act 2011, Jharkhand Regional Development Authority Act 2001, Mineral Area Development Authority Act, Jharkhand Industrial Area Development Authority Act. within the development plan area of ……., has been supervised by me/us and has been constructed strictly conforming to the sanctioned plan and structural design as per the provision of NBC,2005. The work has been done to my/our best satisfaction. All the materials used in construction of this building are strictly in accordance with BiS/ISI specifications and norms conforming to National building Code, 2005 covering all the safety factors including earthquake and cyclone. I/we will be responsible and liable for action by ……..Authority/Govt. if there is any structural failure and fire endangering the inmates and public.

(i) Architect/Engineer:-
Name:-
CoA registration no.
(for Architects)
Empanelment no:
Signature with date

(ii) Engineer/Structural Engineer:-
Name
Empanelment No:
Signature with date

(iii) Builder/Owner/Applicant:
Name:
Registration no.
Signature with date

Annexure – V
Inspection Checklist During Construction

Construction Stage	Element	As Per Building Plan		Remark
		Yes	No	
Plan check	All, specially structural calculation , fire safety, area of glazing			
Commencement	Assessment of existing lintels, foundations, beams			
	Trial Hole			
	Check for encroaching trees, made up of ground, etc			
	Access for fire service			
Foundation & Excavations	Excavations (Depth/ width, distance to tree & drain)			
	Movement of Joints, anti-heave protection , clearance to drain			
	Piling			
	Steel Enforcement			
	Ground Preparation for raft			
Basement / tanking	Tanking for below ground walls & floor			
	Retaining wall			
Over site	Ground Floor preparation (hardcore etc)			
	Suspended timber ground floor preparation			
	Pre cast concrete beams/floor (ventilation & DPC)			
	DPC			
	DBM			
	Gas Protection – landfill, radon etc			
	Floor insulation			
	Site level for disabled access			

Drainage (before back fill)	Sewer branches to the site			
	Drainage laid prior to coverage			
	Ground percolations tests (septic tanks and /or soak-aways)			
	Excavated Soak-away pits			
	Exposure of main sewer			
	Rerouting of main sewer/ relocation of main sewer			
Super Structure	Frame – concrete reinforcement or steel or timber			
	Floor joists and beams and connections			
	Construction at first floor level, eg block work and wall ties			
	Construciton at 2nd and subsequent floor levels			
	Dormer framework prior to boarding over			
	Roof timbers, restrains straps, bracing			
	Roof breather membrane			
	Staircase installed			
	Vehicle Barriers / bay			
	Fire protection applied to structural members			
	Cavity barriers / fire stopping			
	Fire dampers and fire collars			
	Means of escape			
	Space separation & compartmentatioin			
	Glazing			
	Opening to conservatories etc			
	Area of Glazing			
	Thermal elements (cavity walls etc)			
	Access			
Pre Plaster	Sound insulation in walls, floors and stairs			

	Insulation in walls and roof			
	Bare walls, beams, lintels			
	Fire door			
	First fix electrical (dwellings only)			
	Ventilation system			
	Hygiene (sanitary convenience & washing facilities – pipes etc)			
Completion	Drainage water tightness test			
	Internal lighting , appliance (CO2 emission rate (DER/BER)			
	Heating system, incl thermostatic control			
	Sound insulation test			
	Gas tightness test to flues			
	Electrical installations (dwellings only)			
	Combustion appliance & fuel system storage			
	Air leakage test			
	Hygiene (sanitary conveniences & washing facilities)			
	Test of emergency lighting and fire alarms			

Annexure- IX
Checklists for Structural Safety

ITEM	As Per Building Plan				Remark by authorized representative
	Yes	No	Non applicable	Applicable	
1) Structural Safety					
1. Provide Design Basis Report as per the document					‘
2. Provide description of Sub-structure and Super-structure as per the format given in the Ref(5&6) enclosed.					
3. Provide brief Description of Structural System with sketches, images of drawing. etc. with specific focus on Lateral load resisting system‘.					
4. Provide brief note on modeling, software used etc. Clear mention whether infill / partition wall is idealized as part of lateral load system?					
5. Provide the height of building in meters.					
6. Provide plan dimensions of the building (mt x mt)					
EQ Loading Details					
7. Provide following EQ loading details.					
a) Zone Factor					
b) Importance factor					
c) Response Reduction factor					
d) Soil Type					
e) % LL considered in seismic					
f) Time Period in the horizontal X- direction (sec)					
g) Time Period in the horizontal Z- direction (sec)					
h) Total Seismic weight (Sw) of building (kN)					
i) Static Base-shear in X-direction (as % of Sw)					
j) Static Base-shear in Z-direction (as % of Sw)					
k) Table of distribution for static base shear					
l) Max. deflection at roof level. (mm)					
m) Max. inter storey drift./ Height					
Vertical Elements Details					
8. Provide following data regarding Vertical Elements.					

a) Size of maximum loaded column					
b) Gravity load on max. loaded column					
c) Axial stress in max. loaded column (Gravity loads)					
d) Grade of max. loaded column					
e) Axial settlement in max. loaded column					
f) Axial settlement in min. loaded column					
g) % Base-shear resisted by all columns along X (static)					
h) % Base-shear resisted by all columns along Z (static)					
Dynamic Analysis					
9. Provide following data from Dynamic Analysis					
a) Total gravity load on floating column (provide table if there are multiple floating columns)					
b) Size and span of girders supporting floating columns					
c) Number of floors supported by floating columns					
d) Deflection of girder under column (from model)					
e) Deflection of girder under column (from s/s action)					
f) Specific details about floating columns on cantilever girders (Refer Table below)					
10. Provide, if applicable, following data for each cantilever.					
a) Cantilever span					
b) Structural system					
c) Nature of usage					
d) Maximum elastic deflection under gravity loads					
11. Provide stability calculations for uplift and overturning(model extract in case of model)					
12. Typical design calculations for footings					
13. Typical design calculations for RCC columns Composite Columns					
14. Typical design calculations for RCC walls					
15. Typical design calculations for RC beams (Or Steel Beams)					
16. Typical design calculations for RCC Girders (Or Steel Girders/Truss)					
17. Typical design calculations for Steel Bracings					
18. Provide a note on special provisions suggested for the building (like dampers etc.)					

19. Soft copy of model including input and output.					

Provide following data from Dynamic Analysis

Modes	Frequency	Time Period in Sec	X-Participation	Z-Participation
Mode 1				
Mode 2				
Mode 3				
Mode 4				
Mode 5				
Mode 6				
Mode 7				
Mode 8				
Mode 9				
Mode 10				
Mode 11				
Mode 12				
Mode 13				
Mode 14				
Mode 15				
	Summation			

Provide Table for lateral deflections (mm) at Terrace Level in the following format.

Load Case	Dxmax	H/Dx	Drift-x	Dzmax	H/Dz	Drift-z

Provide Corner displacements (mm) for Torsional Irregularity(along x-direction) in the following format.

Load Case	Corner- 1	Corner- 2	Corner- 2	Corner- 4	Avg - x	% Max./Avg.
Eq-x						

Wl-x						

Provide Corner displacements (mm) for Torsional Irregularity(along z-direction) in the following format.						
Load Case	Corner- 1	Corner- 2	Corner- 2	Corner- 4	Avg - x	% Max./Avg.
Eq-z						
Wl-z						

Provide acceleration (mg) values in the following format.			
Eq-x	Eq-z	WL-x	WL-z

Ref 5

DESCRIPTION OF SUB-STRUCTURE

No. of basement	
Minimum clearance between outermost basement retaining wall and compound wall	
Has a Shoring system been installed ? Submit sectional detail of the shoring system	
Give details of methodology used to resist uplift pressure due to ground water for tower portion as well as the portion outside the tower.	
Description of the foundation for the tower block	
Nature of Foundation	
SBC assumed T/sq.mt.	
Sub-grade Elastic Modulus	
Intended Use of basements	
If rock anchors are used, are they grouted after installation and stressing?	
Is structural steel used in the construction of the sub-structure?	
If yes, what are the measures taken for its fire proofing and corrosion resistance?	
Whether Expansion/	
Separation joints provided?	

Whether expansion joint/ separation joint continues through basement?	
If yes, detail at Basement level & retaining wall junction	

Ref 6	
DESCRIPTION OF SUPER STRUCTURE	
No. of Floors & height of building in m	
Shape of Building, Plan, Elevation, Whether Symmetric in Elevation	
Maximum plan dimension in either direction in m.	
Ratio of plan dimension	
Typical Floor to floor height in m Maximum floor to floor height in entire height of building in m.	
Aspect ratio (Height of Building till Terrace / Minimum Dimension of Building)	
Type of floor slab	
Average thickness of floor slab in mm	
Whether column are RCC, Composite or In structural steel	

Ref 6

The materials to be tested on site include cement, water, aggregates for concrete, bricks and stones, soil for embankments, and aggregates and bituminous materials for road works. The list of materials to be tested on site is given in the Table 1 below.

Table 1 List of Materials Tested on Site

Sl. No.	***Material***
1	Cement
2	Sand / Fine Aggregates.
3	Water for Construction Works (can be tested in approved lab)
4	Bricks
5	Size Stone
6	Coarse Aggregate for Concrete Work
7	Soil/Earth/Sub-grade Material
8	Granular Sub-base (GSB) Material
9	Material for WBM / WMM
10	Metal for BM/DBM/BC/Surface Dressing/MSS/Premix Carpet
11	Binder for WBM
12	Fine Aggregate for DBM/BC
13	Lime
14	Borrow Material
15	Steel (to be procured directly form manufacture along with test certificate

Annexure-XI
Occupancy Checklist

ITEM	As Per Building Plan				Remark by authorized representative
	Yes	No	Non applicable	Applicable	
1. Number of floors					
Building height					
2. External Setbacks					
3. Building Line, if any					
4. Parking space provision					
5. Abutting road width					
6. FAR					
7. Coverage percentage					
8. Tree Cover					
9. Water harvesting structures					
10. Land if required to be surrendered					
11. Lift/s, water pumps and storage tanks					
12. Internal roads /paving					
13. Parking areas and external lighting					
14. Lightening arrestors					
15. Fire Fighting installations					
16. Lifts					
17. Water pump					
18. Drainage and arrangement for waste water and sewage disposal					
19. Copy of agreement with the apartment Owners' Association/Society					
20. Implementation of Life Safety provisions as mentioned in National Building Code 2005(Group-l Part-W Fire and Life Safety-4)					
21. NOC from Fire Service Department					
Quality Checklists for Building Works					
ITEM	As Per Building Plan				Remark by authorized representative
	Yes	No	Non applicable	Applicable	
1) EXCAVATION & PCC					

A. Pre Excavation					
1.Construction Drawings					
indicating levels available at Site					
2.Proper safety precautions taken					
for site and public					
3.Precautions taken for dewatering					
and protecting site from flooding					
4. Dumping ground established					
Setting out and levels as per					
drawings					
5. Intermediate levels checked					
B. Post Excavation					
1. Characteristics of excavated strata					
noted and deviations informed					
2. Appropriate shoring and					
shuttering done					
3. Final excavation levels, surface					
inspected and approved					
4. Anti-Termite Treatment has been done post excavation					
2) PLAIN CEMENT CONCRETE WORKS					
A . Pre-concreting					
1. All levels and dimensions checked for correctness					
2. Shuttering is as per plan and has no gaps in between					
3. All materials are of specified brand and grade					
B. During Concreting					
1. Mixing of concrete has been done as specified					
2.Slump and other tests carried out as specified					
3. Slump and other tests carried out as specified					
4. Required number of Samples have been taken for carrying out slump tests, cube tests etc					
C. Post Concreting					
1 Concreting has been done as per specified line and level					

2 Curing has been done as specified					
3 Compaction has been done Properly					
4 Remedial measures taken for removal of defects					
3) ANTI TERMITE TREATMENT (ATT)					
1 Chemicals for ATT are as per Specifications					
2 Chemicals in use are within the expiry date.					
3 Sufficient quantities of chemicals are available at site for ATT.					
4 Safety precautions have been taken for carrying out ATT and storage of Chemicals					
5 Record of consumption maintained at site					
4) BACKFILLING					
1. Filling material/ earth is as per specification					
2 Anti-termite treatment has been carried out before commencement of backfilling					
3 Filling has been done in layers of 300 mm, watered and compacted as per specifications					
4 Proper compaction method has been adopted					
5 Filling has been done to the required levels					
5) REINFORCED CEMENT CONCRETE WORKS					
A. Pre-concreting					
1 All specified materials available at site					
2 Cement is of the required grade and not more than three months old.					
3 Shuttering checked for Staging & Propping, line & level, dimensions cleaning etc and its quality approved					
4 Application of oil & grease carried out					
5 Mixer/Vibrator as specified available at site with adequate means to run them during concreting					
6 Cut-out & Sleeves/Inserted					
7 Surface of reinforcement is clean and free from rust					
8 Bars have been provided as per structural drawings					
9 Lap length & dowels provided as per codal provisions					
10 Pin bars & chairs/cover blocks provided as per requirements					
11 Tying of bars has been done Correctly					

12 Service lines(Electrical, Plumbing, Others) if any, provided before commencement of concrete					
B. General Arrangement					
1. Availability/ Arrangement of pumps etc, proper access & walkway checked					
2 Adequacy of vibrators/ needle including diesel vibrator					
3 Slump cone & test cubes made					
4 Safety and health measures taken before commencement					
C. During Concreting					
1 All necessary precautions taken before commencement of concreting					
2 Samples of taken for slump, cube tests etc for each batch					
3 Proper Compaction done and checks on Staging & Scaffolding carried out					
4 Covering of green concrete carried out					
5 Surface finish checked					
6 Construction joints provided					
D. Post Concreting					
1 De-shuttering started on Vertical faces / Other faces carried out as per codal provisions					
2 Proper curing of concrete carried Out					
3 Line& Level of surface checked for correctness					
4 Defects, notified and removed					
5 Cube and other test results will be intimated to the engineer in charge for further action					
6) MASONRY, MORTAR AND PLASTER					
A. Pre-Masonry Work					
1 Availability of material as per daily requirement checked					
2 Quality check for bricks/ blocks/sand/ cement carried out					
3 Provisions kept for electrical and other services					
B. During masonry work					
1 Checking for line/ level/ right angle carried out					
2 Mortar checked for mix proportion					
3 Proper raking of joints					
4 Seismic bands provided as per zonal requirements					
C. Post masonry					

Check cleaning of dead mortar and broken bricks/ blocks etc.					
2 Curing carried out as per requirements					
D. Plastering/Pointing					
1 Mortar for plastering as specified for each side of wall					
2 Quality of cement and sand checked					
3 Curing work done as per requirement					
4 Preparation of surface					
E. During Plastering					
1 Mortar mixing in tray					
2 Addition of water proofing compound					
3 Proper roughing of first coat					
4 Check for collection of mortar Spills					
5 Cleaning of dead mortar					
6 Check of waviness					
7 Check for grooves/ drip moulds					
8 Application of cement slurry on concrete surface					
F. After Plastering					
1 Curing					
2 Check for hollowness					
3 Check for cracks					
4 Check for diagonal					
5 Lime wash after 3 days (within5 days in case of neeru application)					
6 Safety and health measures					
7) WATER PROOFING					
1 Surface for waterproofing has been prepared and cleaned					
2 Safety measures/ precautions taken before commencement of works					
3 Specified type of water proofing Used					
4 Specified material used for waterproofing					
5 The material used was as per specification					

6 Work has been carried out as per specifications by the department/ specialized agency					
8) IPS/TILE FLOORING AND DADO					
1 Layout of floor checked and proper slopes for draining water are maintained specially in bath room and toilet.					
2 Thickness bases at GL checked of different floor					
3 Check for proper back filling under floor done					
4 Metal/glass strips laid properly in IPS flooring					
5 Curing of IPS Flooring done as per requirements					
6 Dado provided as per required height					
7 Cleaning and finishing done					
9) PLUMBING & WATER SUPPLY					
1 GI/CI/HDPE pipes etc. confirms to relevant IS codes					
2 Pipes of required diameter and their fittings used					
3 Plumbing and Water Supply work carried out through a licensed plumber					
4 Works done as per specification					
5 Plumbing and Water Supply works tested on completion -					
6 Defects rectified					
10) INTERNAL ELECTRICAL WORKS A.GENERAL					
1 Layout plans: showing the position of L.T Panels/ distribution board, lighting fixtures, lighting distribution, scheme, receptacles, etc available before commencement of work					
2 All the following items are as per specification and of approved makes					
L T Panels/ Distribution Boards Lighting Fixtures Conduits, including accessories Receptacles					

Junction Boxes Cables/Wires Any other item					
B. SURFACE CONDUIT WIRING / CONCEALED CONDUIT WIRING					
1 Conduit and accessories are of specified make, gauge and diameter					
2 Proper installation of all conduit wiring and concealed wiring.					
C. CHECK LIST FOR EARTHING					
1 Earth electrode provided as specified.					
B. SURFACE CONDUIT WIRING / CONCEALED CONDUIT WIRING					
1 Conduit and accessories are of specified make, gauge and diameter					
2 Proper installation of all conduit wiring and concealed wiring.					
C. CHECK LIST FOR EARTHING					
1 Earth electrode provided as specified					
B. SURFACE CONDUIT WIRING / CONCEALED CONDUIT WIRING					
1 Conduit and accessories are of specified make, gauge and diameter					
2 Proper installation of all conduit wiring and concealed wiring.					
C. CHECK LIST FOR EARTHING					
1 Earth electrode provided as specified.					
CHECK LIST FOR EXTERNAL ELECTRICAL WORKS					
A. CHECK LIST FOR O.H. LINES					
1 Poles used are of approved make as specified and conform to relevant BIS codes					
2 Test certificate as applicable.					
3 Pole embedded below ground level as specified. 4 Metallic poles are adequately earthed with specified size of earth conductor.					
5 Strays struts, insulators, conductors used conform to relevant BIS Code.,					
6 Earth wire conductor used as specified					
7 Lightning arrestors used as specified					
B. CABLE LAYING					

1 Trenches of specified dimensions excavated and prepared					
2 Required quantity of sand cushioning provided; cable laid; another layer of sand and brick protective covering provided. Refilling done earth ramming and dressing done					
3 Cables entry point in building or crossing roads path protected by providing Hume pipes or PVC pipe					
4 Cable tested before and after laying and before emerging					
C. CHECK LIST FOR EARTHING					
1 Earth electrode provided as specified					
2 Types and size of main/ sub main and circuit earthing conductors provided as specified.					
11) DRAINAGE WORKS					
1 Excavation for drains carried out as per the approved lay-out					
2 Bed Concrete laid as per specifications with proper slopes and cuttings					
3 All pipes procured and laid as per requirement					
4 Jointing of pipes done as per specifications 5 Manholes provided as per design					
6 Materials for construction of manhole as specified					
7 End of the pipes plugged					
8 Drainage line tested before putting to use					
13) OTHERS					
1 Whether the provision for adequate ventilation and natural lighting has been made as per National Building code?					
2 Whether facility for storage in terms of Almirah/ Shelves / Lofts / Platform has been made ?					
3 Whether Sanitary fittings have been provided?					