



255 E. Wilson Avenue  
 Lombard, IL, 60148  
 Office: 630-620-5750  
 Fax: 630-629-2374

## Electrical Service Upgrade Permits

### Inspection Requirements:

A final electrical inspection is required upon completion.

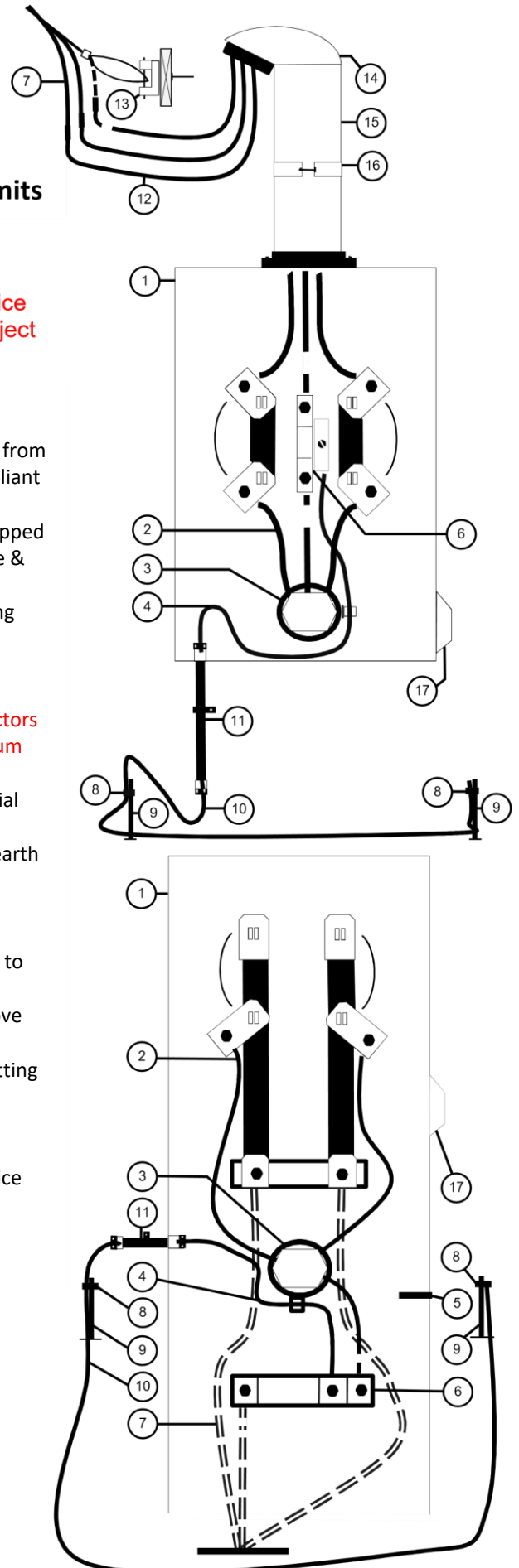
**Note: ComEd may have a cost associated with any electrical service changes. Please have your electrician call ComEd before your project begins. ComEd: 1-800-334-7661**

#### Overhead (OHD) and Service Lateral (UG) Electrical Service Connections

1. UL/CECHA labeled meter fitting.
2. Feeder conductors to Main Circuit Breaker inside; if more than **5 Feet** from entry to MCB then a main circuit breaker at meter or other NEC compliant option required.
3. Properly sized conduit nipple, secured with 2 locknuts at each end, capped with insulated grounding bushing with lugs and Duct seal inside nipple & **torque all wired connections to manufacture spec.**
4. Bonding conductor sized per Table 250.66 NEC (Same size as grounding electrode conductor).
5. Grade level mark (enclosure must extend 18 inches below grade).
6. "N" (neutral) bus bonded to enclosure.
7. Com-Ed Service Drop (OHD) or Service Lateral (UG). **Overhead Conductors to be Copper type - Under Ground Conductors to be AA-8000 Aluminum type**
8. "Acorn" or other NRTL listed ground rod clamp suitable for Direct Burial (DB).
9. (2) NRTL listed 5/8" x 8' copper ground rods installed in undisturbed earth **6 feet** apart minimum, required if "Ufer" (concrete encase electrode) ground isn't utilized.
10. Grounding Electrode Conductor to rod.
11. RMC or IMC for Grounding Electrode Conductor (GEC) to rod, bonded to GEC at both ends.
12. Drip loops (lowest point of drip loops and drop- Minimum 10 feet above grade or platform).
13. Point of attachment (POA), fork bolt, eye plate or (Listed) approved fitting (10 feet above grade minimum).
14. Service Head (mounted above POA).
15. RMC or IMC riser with treaded weatherproof hub.
16. Listed conduit clamps within 3 feet of meter and within 1 foot of service head and between as required per NEC.
17. Inter-system Bonding Termination (IBT) per 250.94 NEC. (grounding

### Notes:

- Mogul or other NRTL listed "LB" required for services.
- Service Revisions shall be "live" from old ComEd lines in a safe and approved method, and old equipment removed.
- A minimum separation between electric and gas service meters of **36 inches** is required.
- Consult Utility, Village and NEC for other requirements before construction including larger services.
- All Electrodes present at each building or structure shall be bonded together to form the Grounding Electrode System, Nec 2017 Section-250.52(A)(1) -(A)(7) especially Concrete Encased Electrode (A)(3) [Ufer].

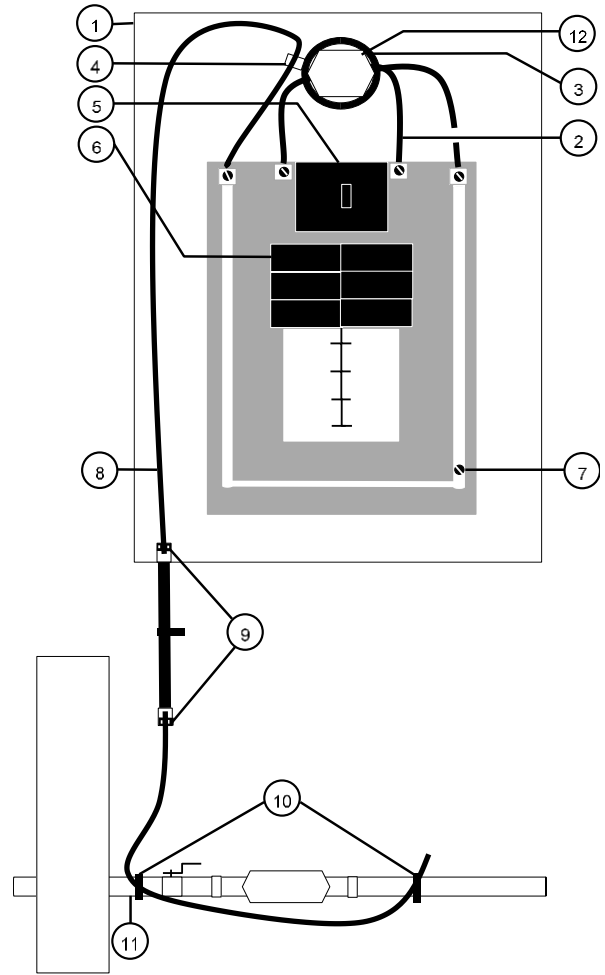


### Panel and Grounding Connections

1. UL listed panel board.
2. Service Entrance Conductors **Maximum** Entry into building **5 feet**.
3. Conduit nipple and grounding bushing.
4. Bonding conductor.
5. Main Circuit Breaker.
6. Branch breakers.
7. Neutral bus bonded to enclosure except where main disconnect is remote (inside or outside).
8. Grounding Electrode Conductor (GEC).
9. GEC conduit bonded at both ends.
10. Listed GEC to pipe clamps, used as listed.
11. Water pipe ground to be connected within **5 feet** of entry to building and provide water meter bonding jumper.
12. Caulk around any conduit penetrations, and duct seal inside entry conduit.
13. Provide bond for hot, cold water pipes and gas pipe.
14. **Provide tighten torque for all wired connections according to manufacture specification**

**Notes:**

- Panel only changes shall meet all above requirements.
- Services with **remote main disconnects** require specific grounding/bonding installations different from above; see NEC 2017 Section 250.24(C).
- Multiwire Branch Circuits (MWBC) requires simultaneous disconnection of all ungrounded conductors at the source breaker and grouped by wire ties or similar means. NEC 2017 Section 210.4 (A)-(D)
- Other NEC Articles and Sections may apply, especially Art 230 (Service) and Art 250 (Grounding & Bonding)
- Panel legend to be filled out completely and accurately NEC 2017 Section 408.4.



### Electrical Service Main Panel Connections

Service Size	Entrance Conductors
100 amps	4 AWG
200 amps	2/0 AWG
300 amps	MCM 250
400 amps	Parallel 2/0 or MCM 500

If you have any questions please contact the Building Division at 630-620-5750 or Email [Permits@villageoflombard.org](mailto:Permits@villageoflombard.org).

**Table 250.66 Grounding Electrode Conductor for Alternating Current System**

Size of Largest Ungrounded Service Entrance Conductor or Equivalent Area for Parallel Conductor (AWG/Kcmil)	Size of Grounding Electrode Conductor (AWG/Kcmil)
	Copper
2 or smaller	8
1 or 1/0	6
2/0 or 3/0	4
Over 3/0 through 350	2
Over 350 through 600	1/0
Over 600 through 1100	2/0