

# New York Electrical Inspection Services

The Premier Electrical Inspection Agency in Westchester,  
Putnam, Dutchess and Rockland

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## Events of Special Interest

IAEI Meeting  
Summer Break

NYEIS-ETS  
SEMINARS  
Summer Break

Westchester County  
Licensed Electrical  
Contractors Assoc.

Summer Break

Putnam County  
Electrical  
Contractors Assoc.  
Summer Break

Dutchess County  
Electrical  
Contractors Assoc.  
Summer Break

Orange County  
Electrical  
Contractors Assoc.  
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*NYEIS wishes to thank all those who responded to our first newsletter. All comments, suggestions and requests for future topics are welcomed. Send them to [rontroyer@nyeis.us](mailto:rontroyer@nyeis.us)*

## WATER PIPE BONDING-STREET SIDE FIRST

In residential homes with a metal underground water pipe the present 2002 code states "**bond the Grounding Electrode Conductor to this pipe within 5' of where it enters the building.**"

Look back historically at how this bonding has evolved. NEC 1990 Art. 250-112 "**Grounding Electrode connections shall be accessible and permanent. Jumpers around insulating joints and equipment likely to be disconnected or**

**removed for repair or replacement shall be of sufficient length to permit this removal while maintaining the integrity of the bond.**"

Later code cycles removed this wording but the intent is still valid today. Water meters will require replacement and a Grounding Electrode Conductor must provide enough slack to facilitate removal without requiring disconnection. Grounding electrode connections **WILL BE** lost and serious

problems may result if disconnected. Solution : Hit the street side first then jump back to the house side with a large enough loop so no screws need to be loosened. Note: No connections are allowed on plumbing unions or fittings. Although no code or utility reference could be found requiring street side first, it is a practice based in sound electrical principles. We have used the old code reference to show the intent of the code.

## TRENCHES

Table 300.5 and its five notes detail the various depths of trenches based on wiring methods employed and the conditions applied to each method. For example in Column 3 (Nonmetallic Raceways), 18" is the minimum depth but when rock or ledge limit the trench between 18 and 12 inches, 2 inches of concrete must be poured over the PVC conduits. If the trench is less than 12", either 4" of concrete is required or, according 300.5 (d)(1) "**rigid metal conduit,**

**intermediate metal conduit, Schedule 80 PVC or equivalent"** must be used.

When UF is run in trenches between 18 and 12 inches, it must be sleeved prior to the 2" concrete pour. Unsleeved UF is not approved for "**poured cement, concrete or aggregate.**" 340.12 (8). Additionally, any UF used in commercial applications must be in a trench 24" in depth. All backfill shall be cleaned of large rocks, sharp objects and corrosive materials. 300.5 (F) 300.5 (D)(3) states

service conductors not encased in concrete require a warning ribbon or tape laid in the trench 12" above the underground installation. Finally, service trenches with HDPE for Con Ed require inspection from your Con Ed CSR, not NYEIS. All other trenches, without exception, require inspection prior to any backfill to ensure conformity to Article 300.5. Any trenches backfilled prior to inspection are subject to being reopened.