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| <br><b>Building Division</b> | <b>WATER SERVICE</b><br>City of Palo Alto (CPA)<br>Building Inspection Division<br>285 Hamilton Ave.<br>Inspection Request: 650 329-2496<br><b>IVR# 225</b>                  | Revision Date:03/04/11<br>General Requirements/Checklist<br>for: <b>Residential</b><br>Codes Enforced:<br>2010 CBC, CPC,CEC<br>Palo Alto Municipal Code (PAMC) |
|   | The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate. |  |

### **WARNING**

- Failure to complete items below prior to inspection may result in a re-inspection fee.

### **DEFINITION**

- Water service is defined as the pipe carrying potable water from the water meter to the building. *CPC 204 (b)*
- See "REPIPE" and "ALL TRADES" checklist for water piping within a building.

### **NON METALLIC WATER SERVICE**

- Non metallic pipe identification: a label shall be fastened to the main electric meter panel stating "**THIS STRUCTURE HAS A NON-METALLIC WATER SERVICE**". *IAPMO Installation Standards 7-90, 609.5*
- Where a grounding system is installed, inspected, and approved, a metallic pipe may be replaced with non-metallic pipe. *CPC 604.8*

### **ELECTRICAL GROUNDING AND BONDING SYSTEM**

- When modifying a metallic water piping system, the plumber shall be aware that the plumbing system is part of the electric grounding and bonding system. Any modification to plumbing system will require the electrical grounding and bonding system to be brought up to meet *CEC Article 250 Requirements*.

### **EXCESSIVE WATER PRESSURE**

- Where local static water pressure exceeds 80 psi (typically West of El Camino Real) an approved type pressure regulator preceded by an adequate strainer shall be installed to reduce pressure to 80 psi or less. *CPC 608.2* See "Excessive Water Pressure" under plumbing in the index.

### **REQUIRED INSPECTION**

- Trench depth, Electrical bonding & grounding, and water test.

**CPA INSPECTION** **Materials, Size and transitions**

- Water piping systems shall be of approved materials. See table 6-4 below for approved materials. *CPC 604.0*
- Full way brass shutoff valve** shall be accessible at all times and installed immediately ahead of the hose bib supplying the building. *CPC 605*
- Water Service copper pipe** : All under ground/slab copper pipe shall be Type L and shall be identified with a blue stripe. Exception: Copper pipe that is above ground in or on, a building or under ground outside of structure may be Type M identified with a red stripe *CPC 604.3*
- Pipe size:** Water service pipe shall be sized in accordance with the fixture unit load and in no case less than  $\frac{3}{4}$ " pipe *CPC 610.8*.
- Galvanized steel** water piping must be kept at least 6" above ground and shall not be used underground. *CPC 604.6*
- Transition between copper and galvanized steel** water piping shall be made with either a dielectric union (accessible location only) or 6" brass nipple and brass coupling. *CPC 316.2.4. , 311.6*
- P.V.C. water piping** shall be joined with approved glue and primer. Female PVC screwed fittings for water piping shall be used with plastic male fittings and plastic male threads only. *CPC 606.2.2*

 **Trench and Backfill**

- See "Joint trench" checklist for all trench piping requirements.
- Water service piping shall be laid on a firm bed for its entire length and back-filled with a min. burial depth of 12" from meter to building. *CPC 609.1*
- PVC/Plastic pipe shall backfilled with clean earth or sand free of stones/boulders, etc. *CPC 315.4*

 **Testing**

- Water pipe shall be tested and proved tight under water pressure not less than the working pressure under which it is used. Except for plastic piping, a fifty psi air test may be substituted for water test. All piping shall test for a min. (15) min. *CPC 609.4*

**INSPECTION OF STREET CONNECTION**

- A Street Work Permit issued by the Public Works Department is required if work is to be performed in the City right-of-way such as underground work, saw cutting and/or repair of sidewalk or pavement
- Tunneling is not allowed, except for approved methods such as “pipe bursting” see pipe bursting checklist under plumbing in index.
- Remove any USA marks from the sidewalk.
- The Building Permit should not be signed-off until the Street Work Permit has been obtained and any sidewalk damage repaired.
- The contractor should not leave open trenches at the back-of-walk. If the contractor does not complete the work during the day, he must cover the trench located in the right-of-way.

**APPROVED MATERIALS**

**Table 6-4**

| MATERIAL                  | WATER DISTRIBUTION<br>PIPE AND FITTINGS |      | BUILDING SUPPLY PIPE<br>AND FITTINGS |
|---------------------------|---|------|--------------------------------------|
|                           | HOT                                     | COLD |                                      |
| Asbestos- Cement          |   |      | X                                    |
| Brass                     | X                                       | X    | X                                    |
| Copper                    | X                                       | X    | X                                    |
| Cast Iron                 | X                                       | X    | X                                    |
| CPVC                      | X                                       | X    | X                                    |
| Galvanized Malleable Iron | X                                       | X    | X                                    |
| Galvanized Wrought Iron   | X                                       | X    | X                                    |
| Galvanized Steel          | X                                       | X    | X                                    |
| PE                        |   |      | X                                    |
| PE-AL-PE                  | X                                       | X    | X                                    |
| PEX                       | X                                       | X    | X                                    |
| PEX-AL-PEX                | X                                       | X    | X                                    |
| PVC                       |   |      | X                                    |