

CONSTRUCTION GUIDELINE**TERMINATION of EXISTING DUCTS
in NEW VAULTS or MANHOLES**

When enlarging or installing new manholes and/or vaults, all existing ducts shall be terminated in the new structure using the appropriate method of the following three. This shall apply to all ducts unless noted otherwise. In all cases 6 each 1/2" steel rebars shall be located as shown and terminated 3" from the face of the wall. On new installations, one additional 4" duct for fiber optics shall be included in the duct bank. In the network area, ducts shall be terminated in an 8" window 45° to the inside of the vault. On new installations in the network area, two additional 2" ducts shall be included in the duct bank. A system neutral shall be pulled into one of the 2" ducts and connected to ground as an aid in locating the duct bank.

1. **ROUND DUCTS:** The ducts, regardless of the material, shall be cut back to allow for installation of the vault and later extended into the structure. The extension shall be encased in a minimum of 2" of concrete. All ducts shall be end belled flush with the inside wall of the structure. The 2" duct shall be end belled with a coupling. This is to allow the possible connection of a pump discharge. The existing duct encasement shall be painted with undiluted polyvinyl acetate bonding agent, "Weldcrete", prior to pouring the new concrete.
2. **SQUARE TILE DUCTS:** The existing ducts shall be cut square with the inside wall of the structure and shall be beveled by grinding and/or adding grout to form a bevel.

SQUARE TILE DUCTS ALTERNATE: (Only with the written approval of the Network Engineering Manager). The ducts shall be removed back to the next joint (minimum of 24") and a square-to-round adapter (City Light Stock number 734565) installed. Extend the (now) round ducts into the structure and install end bells and encasement as for round ducts. The spacing at the structure wall shall be 2".

3. **DUCTS WITH EXISTING CABLES:** When existing cables cannot be removed, square-tile ducts may be cut flush with the inside wall or; if converted to round ducts the extension may be split lengthwise and securely wired together over the cables prior to encasing them in concrete. The joint shall be taped to prevent concrete entrance into the duct.
4. **EMPTY DUCTS:** Cable protectors, marked with the destination of the empty conduit, may be installed in the termination of empty conduits. Use a permanent marking pen. This is especially important for service or stubbed out conduits (i.e. those which do not go to a City Light vault).
5. **NON-TRANSPPOSITION:** Ducts should not be transposed between vaults unless it is absolutely unavoidable.

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