

## CFW - UTILITY CORE HOLE METHOD

“Core Hole” method may be utilized for exposing existing utilities located under pavement in efforts to minimize the removal and replacement of pavement, and minimize disruption to vehicular and pedestrian traffic. Contractor required to expose city owned facilities (Water, Sanitary Sewer or Storm Water) that are 16 inches in diameter or greater, then verified by the assigned TPW inspector before crossing (no exceptions).

### **Never leave an open core hole unattended (no exceptions). Protect by either method:**

- Temporary backfill with sand or gravel and a cold-mix cap until permanent repairs can be made.
- Secure a “core hole plate” for each core cut/opened to minimize movement of plate.

### **Core procedure:**

- Contact the assigned inspector prior to cutting any cores.
- Maximum *8-inch* diameter core. Mark the *core* and the *surrounding pavement* so able to properly align when resetting the core.
- Avoid cutting a core within 6 inches of a control joint, seam or within an ADA ramp or other cores.
  - Do NOT cut a core in cracked/damaged pavement as it will not be able to be properly reset.
- Carefully excavate by *vac* method by utilizing air/water to avoid damaging the utility being exposed.
- SAVE, protect and store removed core(s) holes so not lost or damaged.
  - If core is damaged and cannot be reused, a replacement core from another location may be utilized as long as similar size, material and diameter.
  - Cannot fabricate a new core out of new hot-mix or cold-mix.
  - If no core available, limits of the paving repairs will be determined (based on age/condition/PCI index of pavement per 2019 Utility Construction Policy).

### **Backfill Requirements:**

- Coordinate backfill/restoration with assigned inspector.
- Place 6 to 12 inches of *cushion sand* around the exposed utility.
- Measure and determine where *flowable fill* should be placed up to (bottom of core to be reset).
- Backfill excavated void with an *excavatable flowable fill* or an equivalent material (80 to 200 PSI):
  - Large number of holes: Utilize a ready-mix truck.
  - Small number of cores: **Type N** mortar mix or **F-4 Fast Fix Flowable Fill** will be allowed as an *equivalent material* if properly mixed/placed per the manufacture’s specifications.

### **Resetting Core:**

- Structural grade epoxy shall be utilized for bonding the core.
  - Epoxy shall meet **ASTM C881 Compliant High Modulus Adhesive standards.**
- Epoxy shall be placed in the hole, insert and rotate core to ensure epoxy rises to the surface so leaving no voids between the core and surrounding pavement.
- Concrete cores to be set level and the *broom finish* marks lined up with surrounding finish.
- All cores should be flush/level with the surrounding pavement surface so not setting too low.
- Screed off and remove excess epoxy.
- Contractor may be required to grind off excess epoxy 24 hours after placed.

Contact the assigned inspector with any questions or concerns.

**CFW - UTILITY CORE HOLE METHOD**

**Acceptable Repair**

How core repair should look (level, epoxy properly placed and color of epoxy to match pavement).



**NOT an Acceptable Repair**

Wrong material used to put core back OR not replacing with original core (fill to top).



## CFW - UTILITY CORE HOLE METHOD

Acceptable material for permanent backfill of excavated area between cushion sand and core.



Examples of commonly used materials for permanently core repairs. The City of Fort Worth does not dictate what brand, manufacture or company where materials are obtained as long as epoxy meets **ASTM C881 Compliant High Modulus Adhesive standards**.

