Selecting a Good Contractor

- Can they provide addresses to jobs they performed 10+ years ago?
- Can they provide addresses to jobs they performed in the last year?
- Can they provide you with a copy of their insurance certificate showing workman’s compensation coverage?
- Are they willing to create sample mockups on your building (grinding, cleaning, pointing)?
- Ask what materials they plan to use on your project and ask them to provide product data sheets.
- Ask how they plan to prepare your masonry for cleaning, pointing, etc.

Selecting Proper Mortar

- Use a pointing mortar that is weaker than the original mortar.
- Use a pointing mortar that is weaker than the surrounding masonry units (i.e. brick, stone etc.).
- Use a pointing mortar that is more vapor permeable than the original mortar.
- Use a pointing mortar that is more vapor permeable than the surrounding masonry units.
- Use a sand that is well graded with some fine, lots of medium and some coarse grains.
- The largest grains of sand shall have a diameter roughly 1/3 the width of the mortar joint.

Wall Prep

- Mortar joints shall be removed to at least 2 times the width with a ¾” minimum depth (Ex. ½” wide joint should be cut back 1” deep min.).
- Mortar shall not be applied at feather edge thickness. Patchwork must be applied at a minimum of 1/4” deep.
- Patch area shall be of regular geometry with straight edges and near right angles (no curves or sharp angles).
- Remove as much old mortar from masonry units as possible so mortar obtains direct contact.
- Remove all dust and debris from area to ensure sound bonding.
- Follow above steps without damaging masonry units.
- Pre-wet the wall with copious amounts of water.
- Apply mortar in one lift (not in multiple successive layers) using proper sized pointing tools. Grout bags or tuckpointing guns are not recommended.
- Tool joints neatly so as not to smear mortar onto units. DO NOT BRUSH WORK!
- Slowly cure mortar for at least 3-7 days.

Proper Caulking

- Caulk shall only be bonded on two sides.
- Use backer rod to de-bond bottom side of caulk joint.
- Use backer rod to set proper depth of caulk joint.
- Depth of caulk joint shall be ½ the width at the center.
- Caulk joint shall have convex tooling so as to provide hourglass shape in section.
- Always use caulking primer.
- Never caulk on wet surfaces.
- Only use caulk on moving joints.

Chemicals and Repellants

- Do not clean buildings unless absolutely necessary.
- Not all masonry needs to be “sealed” with water repellants.
- Create test panels on every type of substrate to ensure products will not damage masonry.
- Use the weakest effective cleaning solution on your masonry. STRONGER IS NOT BETTER!
- Never apply paints, sealers or any other film forming coating to masonry. Only deep penetrating water repellants or stains shall be used.

Resources

Old House Journal  
http://www.oldhouseonline.com

NPS Technical Preservation Services  
http://www.nps.gov/tps/standards.htm

APT Building Technology Library  
http://archive.org/details/buildingtechnologyheritagelibrary

Historic Chicago Bungalow Association  
http://www.chicago-bungalow.org
Masonry Restoration Bill of Rights
(By Larry Jones)

Article 1: “Respect all that is left of me, sacred as it is, my historic fabric”.
Article 2: “Clean me not, unless it serves to halt my further deterioration”.
Article 3: “But if you must clean me first, just plain water please”
(or the weakest effective cleaner).
Article 4: “If I am clean but still look old, leave me be; graceful aging it is called”.
Article 5: “Whatever you do, please don’t boil me in acid or scour me with sand”.
Article 6: “Know that a good state of repair is, in itself, good preservation”.
Article 7: “Know what is wrong with me before you plan how to fix me”.
Article 8: “Repair me only where I need it, and with materials just like me”.
Article 9: “If I am leaking water, find out where and fix just that”.
Article 10: “Please no cure-all treatments to cover me up or clog my pores”.

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