



October 30, 2017

MKM and ZFA have been discussing best practices and meeting with the County (and hopefully the City soon) to develop consistent guidelines and expectations for the firestorm victims.

Based on the Right of Access Letter and confirmed at Sonoma County / Santa Rosa City debris removal meeting (October 26) the homeowner must allow removal of all foundations if pursuing public cleanup option. Stem walls and retaining walls may be left on a case-by-case basis for erosion control purposes only. Homeowners initiating participation in the program and later deciding to keep a foundation will be withdrawn from the program and billed for cleanup services up to that point. If an owner begins the cleanup process with a private contractor, they may not be able to opt back into the Federal cleanup program.

Based on our respective research and limited site reviews we currently have the following recommendations:

- For flat lots with shallow spread footing foundations/mat slabs we recommend full removal and replacement of the foundation. In these cases, the majority of the above ground concrete, including slabs, is likely damaged and thus there is little benefit to keeping the concrete. In addition to concrete degradation, the vapor barrier, if it exists, and under slab utilities may have been compromised by the heat.
- 2. For flat lots, with light pier and grade beam foundations, full removal of the grade beams is recommended. The piers may remain, but likely will not be used as part of the permanent foundation unless approved for reuse by a Structural engineer and Geotechnical Engineer. We believe, in consultation with Geotechnical Engineers, that more damage to the soil will likely occur if the piers are removed.
- 3. For hillside sites it may be advantageous to keep portions of the foundations, but it is likely that significant portions of the above ground elements are damaged. However, substantial portions of the below grade elements may be undamaged. To attempt to re-use the foundations:
 - a. Attempting to save foundations may require homeowner to opt for private cleanup, as discussed above. To complete this approach a contractor will need to clear enough debris for review by the structural engineer. It can then be determined if the existing foundation can be used. If so, removal of debris without damaging the foundation will be necessary. If, however, the foundation is unusable then it shall be removed.
 - b. The existing drawings should be available, and the concrete should test to an appropriate strength level. If no drawings are available, significant investigation and testing would be required to reuse the existing foundation.
 - c. Site review to verify the foundation matches the original drawings and testing to verify reinforcing spacing may be necessary. Unfortunately, it may be difficult to examine the condition of foundations if the debris is not removed.
 - d. While this is a nonstructural issue, the city will also require that the underground utilities are certified as being acceptable but has not provided direction on how to achieve it.
 - e. Site soils will need to be tested for contaminants and cleared. Additional soil may need to be removed and may effect foundations.

The homeowner should be clear about options for government removal and impacts to the site, which can be substantial.

These are our current recommendations. We are continuing to meet with the county and city. We will modify our recommendations, as warranted, especially relating to hillside sites. A more formal document may be produced to assist in the reconstruction efforts.