PreCon LogStrat, LLC
PO Box 417
Mastic Beach, NY 11951
(631) 772-9540 Fax (866) 450-6978
info@precon-logstrat.com
www.preco logstrat.com

Consultants with tools.

10/12/2011

Heritage Restoration, Inc.
122 Manton Ave., Box #7
Providence, RI 02909

RE: Guiteras House, Bristol, RI – Site Visit of 09/28/2011

Ken Follett visited and reviewed various masonry related conditions at the site with Jeremy Ballard.

Front Building – Stone Pointing

1. Throughout the extent of the façade observed on the North, East and South elevations there is cracking in the mortar joints and small areas where there is no mortar present.
2. It is not out of the ordinary for mortar to crack and repointing can be considered general maintenance. When pointing is not maintained over time it shows erosion and cracking.
3. In most cases the cracking appears to be from thermal movement of the masonry.
4. There is cracking related to the window surrounds and evidence of repointing at this location. We suggest that this repointing be reconfigured to allow a soft joint between the window and the masonry.
5. A minor crack in one location at the rear of the North elevation may be from an early settlement movement.
6. Where mortar is missing it appears that the stones were set very tightly together, touching in some locations and our assumption is that once the stone was set that where there was not bedding mortar that the stone was pointed up, and that a thin treatment of mortar has eroded over time.
7. The mortar was sounded with a hammer in several locations and appeared to be hollow behind. We drilled several holes in the mortar and the indication was that the mortar behind the face pointing is soft.
8. Without a petrographic analysis it is not possible to determine if the original mortar was made with natural cement though the visual appearance leads to a likely conclusion that it is.
9. It was mentioned that possibly an upper addition had been made at some time in the past to the top portion of the stonework. Our observation led to a support of this conjecture. If there are any records available we suggest that they be reviewed. We did not at the time of our site visit access the higher levels of the stonework and it may be determined that the mortar in this area is in good condition. For the sake of consistency in appearance and even weathering we recommend that this are be repointed consistent with the lower areas of the walls.

Natural Cement vs. Type N

1. Though a petrographic analysis can be done it is an expense not easily justified, though we do recommend an analysis for the purpose of matching and sourcing of the aggregate.
2. In small quantities of repointing natural cement may not be practical. In a quantity of repointing as it is needed on this structure the use of natural cement becomes practical.
3. An alternate to natural cement would be the use of a 1:1:6/8 Portland/hydrated lime/sand with inorganic tint mortar. Though this mortar would not necessarily be authentic to the existing this is a commonly acceptable repointing mix where natural cement is not a viable option, and where the structure is not likely to have been laid up with a lime putty mortar.

Recommendations

1. Due to the extent of the cracks and the hollow sounding we recommend that 100% of the façades on all four elevations be repointed. The exterior thin mortar to be removed with hand and pneumatic chisels and that the soft mortar interior to the joints be carefully raked out by use of hand tools (not power tools).
2. Areas of mortar removal are recommended to be no more per day then each mechanic can repoint in the same day.
3. Mechanics be instructed and certified in repointing and use of natural cement mortars.
4. We recommend that Heritage Restoration consider contacting Ken Uracius and to arrange for a day of on-site instruction, workshop and training session for mechanics and project managers.
5. The repointing project should be well documented.

Rear Building

1. The condition of the mortar joints at the rear building appeared to be in better condition than at the front building.
2. We recommend repointing with natural cement on an as-needed spot basis, as per the repointing on the front building, wherever there are cracked or hollow sounded joints.

Disclaimer

We are not design professionals, our comments are based on our experience in contracting for historic masonry restoration work, and any and all recommendations and observations that may be considered of a critical nature should be reviewed with an appropriate design professional associated with the project.

Sincerely,

Ken Follett