



CHICORA FOUNDATION, INC.

PRESERVING THE PAST FOR THE FUTURE

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December 13, 2010

Ms. Nancy Elliott
Providence Baptist Church
612 Cherokee National Hwy.
Gaffney, SC 29341

Re: Penetrometer survey of the Providence Baptist Church Cemetery, Cherokee County, SC

Dear Ms. Elliott,

On December 2 and 3, 2010 my assistant, Nicole Southerland, and I visited the c. 1853 2.25 acre Providence Baptist Church Cemetery for the purpose of conducting a penetrometer survey. The goal was to determine how many unmarked graves may be present in the cemetery.

You also indicated that you were interested in determining if an Indian mound is located on the southwestern portion of the church property.

This letter will provide you with an overview of our work and findings.

Methods

There are a variety of geophysical techniques that can be used to identify probable grave locations. For this work we have used a penetrometer.

More precise and reliable than a probe, the hand penetrometer measures soil compaction in pounds per square inch (psi). Areas of posited graves generally will have lower psi readings than those areas where there has been no digging. Like probing, the penetrometer is used at set intervals along grid lines established perpendicular to the suspected grave orientations. The readings are recorded and used to develop a map of probable grave locations. We have found very consistent ranges in soil compaction at cemeteries throughout the region and have previous experience in Piedmont and Blue Ridge areas ranging from Charlotte, North Carolina (Settlers' Cemetery) to Waynesville, North Carolina (Maple Grove Cemetery), south to a cemetery in Douglas, Georgia (City of Douglas). We have performed work at the Macedonia

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Baptist Church, also in Gaffney. The penetrometer is a relatively common forensic anthropology technique and it is used extensively by the FBI to locate clandestine graves. While it is never possible in our field to offer guarantees, I have tremendous confidence in the penetrometer as our foundation has used it successfully at several dozen cemeteries.

This technique *may* be affected by very dry soils (which is currently not a problem in your area), by graveled plots (of which none were present in your cemetery), or by artificial compaction (this seemed to be a possible concern for your property). The inverse of the compaction is the disturbance of soil for something like planting a tree (no obvious areas were known), which would show a reading similar to that of an occupied grave.

At this particular site, we began at known grave locations to establish a base-line reading of grave compaction. We tested at approximately 2 foot intervals in an effort to identify graves. While we tried to follow the lines of graves, we found that the lines were not very organized.

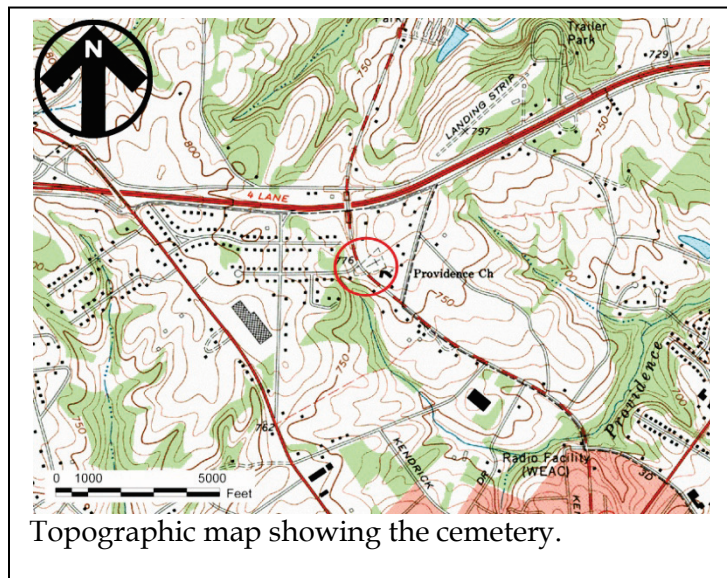
Identified graves were marked by placing surveyor pen flags at the head and foot, with flagging tape stretching between the two flags. Each such marking reflects the head, foot, and centerline of the grave. Actual width dimensions are typically between 1.5 and 2-feet on both sides of this centerline. Graves with headstones were not marked.

In terms of the possible Indian mound, the woods were walked at length and areas just off the church property were also examined.

Findings of Graves

Marked graves were found to exhibit compaction levels of between 50 and 300 psi at depths from 1 to 3 feet (the maximum depth of penetration). Areas outside known or suspected graves revealed compaction over 300 psi, typically within the first foot. Readings in excess of 400 psi were encountered in a number of areas.

Generally graves in the piedmont exhibit compaction of 75 to 150 psi. Non-grave areas typically provide compaction levels of 200 psi and above. Consequently, the findings at both known graves and areas thought not to represent graves in your cemetery are far greater than what we have found elsewhere.

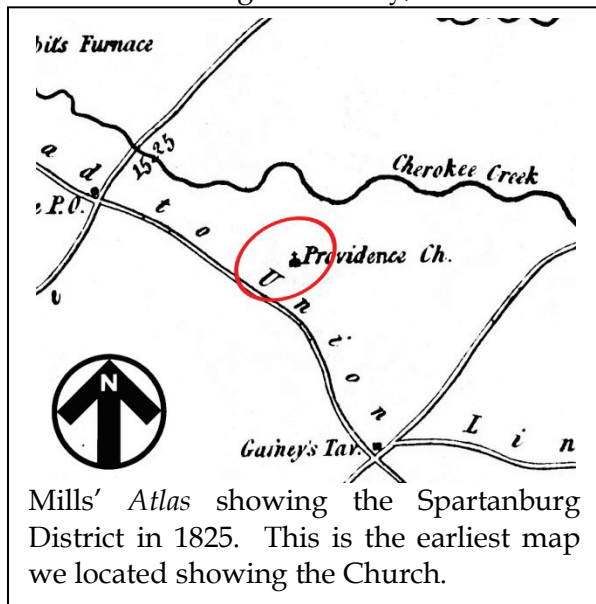


Topographic map showing the cemetery.

There are several possibilities to explain this. One is that monuments are not clearly associated with graves; that is, monuments may have been placed long after the burial took place and the exact location had been forgotten. While this does occur, it seems unlikely that we would find so many examples associated with one cemetery. Another possibility is that erosion has been so severe that C horizon soils are exposed and these naturally exhibit much higher compaction. We did observe exposed bedrock in your cemetery, supporting this explanation. This explanation, while accounting for the very compact undisturbed soils, does not explain why disturbed soils would quickly return to such a high degree of compaction. A third possibility is that the cemetery has been affected by artificial compaction, although the nature of this compaction is unknown.

Regardless of the reason, the very high levels must be taken into consideration. It is very possible that the levels resulted in false negatives. In other words, there are several very large open areas in your cemetery where we were unable to discern individual graves. These areas should be immediately obvious as you look over the cemetery and see the placement of the graves we were able to identify. These seemingly "open" areas may, in fact, contain graves that are masked or hidden by the high compaction levels.

In the larger cemetery, we marked 181 graves, while we only marked 11 in the smaller cemetery on the opposite side of the road. It appears that fewer graves have gone unmarked in this newer section.



One interesting thing we noticed was the placement of newer marble and granite stones in areas with dates indicating very old graves. These may be replacements of earlier fieldstones or wood headboards. It is also possible that by the time the graves were marked, families may no longer have been certain where the grave was located. This may help explain the lack of distinct or neat lines of markers. Subsequent burials may be moved away from earlier burials since there was some uncertainty where the older burials actually were. The placement of "memorial" markers, indicative of a person

buried in the cemetery but not known where, may also point to the cemetery being somewhat full.

Also of note is that existing stones were not necessarily placed at the head of each grave. For example, the graves of Corrie Jones and W.A. Jones extend to the east of their markers, while Era Lee Jones' grave extends to the west. We also found instances where the headstone

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was placed in the center of the grave. It could have been years before a grave was marked, but the point is, even historically, there appears to be some confusion on where the burials were or where they needed to be.

In the newer cemetery, while we found relatively few unmarked graves, we suspect that the plots were probably “spoken for,” but may never have actually been used. Soils in that portion of the cemetery were also unusually compact.

While the earliest tombstone in the cemetery dates to 1853, we found the church on maps as early as 1825. You said the church was established in 1803, so the property has about 50 years in which burials could have occurred, but the markers may have been lost.

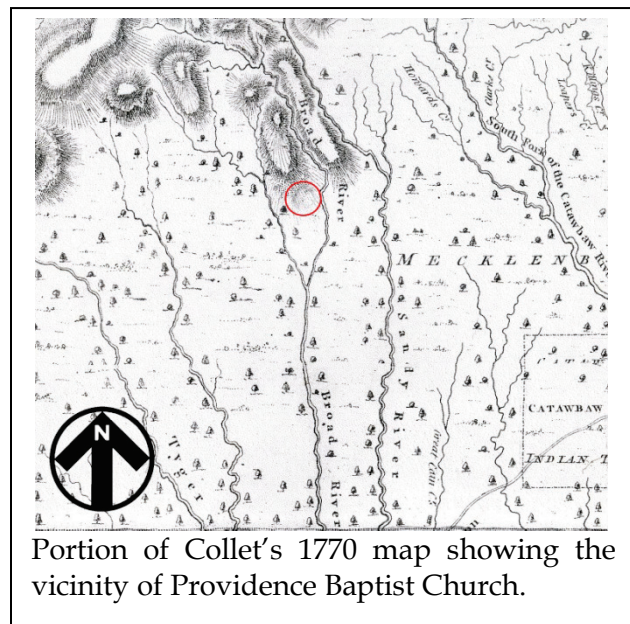
Findings of Indian Mound

We found no evidence of an Indian mound on the church property. In fact, we found nothing that appeared to be Native American anywhere on the church property. That isn't to say that the history for the area is wrong, simply that no evidence to support the claims has been found.

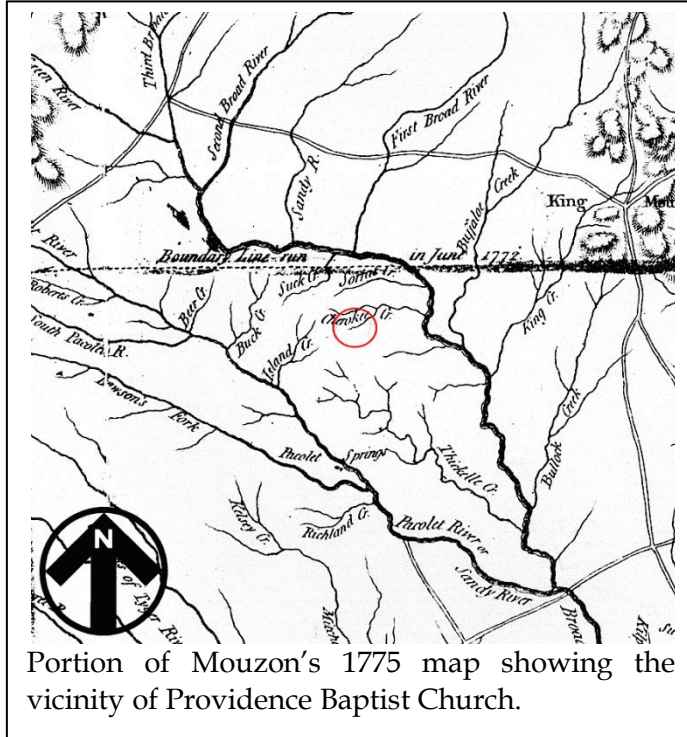
The United States Department of Agriculture has well established maps showing where different soils are located through South Carolina. Within the cemetery areas, there was once a layer of dark yellowish brown sandy loam that was about 0.7 foot in depth. This layer has been eroded away, leaving red clay at the surface. In the wooded areas, there has been even more severe erosion accounting for even over 1.0 foot of soil loss. This is not surprising given the relatively steep slopes (6-10%) in this area.

While there may have been a Native American site on the property, it is possible that erosion has removed any evidence. As for the mound, it seems more unlikely that one would have been located on such steep slopes or on such a small drainage. If one existed in the area, it is likely that it has either been built over or modern agriculture has rendered it unidentifiable.

Some of the earlier maps that we examined, including one from 1770 and one from 1775, fail to show anything in the area. The property is distant from the established Catawba Nation and the road to and from the town. In fact, the 1770 map shows the area to be quite isolated between the Broad River to the east, the Pacolet River to the west and mountains to the north.



Portion of Collet's 1770 map showing the vicinity of Providence Baptist Church.



Portion of Mouzon's 1775 map showing the vicinity of Providence Baptist Church.

However, with the presence of Cherokee Creek just to the north, named at least by 1775, it seems likely that at least some Native groups were in the area.

We performed a brief search of previously recorded sites in the area at the S.C. Institute of Archaeology and Anthropology. This organization keeps documentation of prehistoric (Native American) and historic sites that have been recorded in the state. Providence Baptist Church is in an area where there has not been much archaeological work conducted; however, during work on nearby I-85, two sites (38CK80 and 38CK83) were recorded 0.75 mile and 1.5 miles away respectively. These are the closest sites that have been recorded to the Church. Both of the sites produced very few artifacts, with none of the

artifacts being able to be placed to a definitive time period. Given the high erosion, as previously talked about, these sparse sites would probably be the norm if any more were to be found.

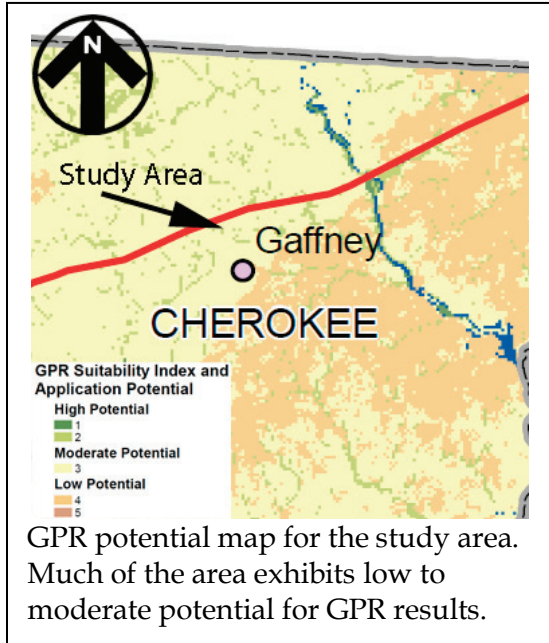
Recommendations

I understand that one of your primary concerns is to mark the unmarked graves. You have a surveyor that will be mapping the cemetery, including the graves that we identified. At the actual grave site, while the granite stones that you mentioned are certainly an option, marking 181 graves might be expensive. We have worked with other cemeteries that have used an aluminum survey cap for rebar, which can be placed at ground level at each grave and labeled however you see fit. Berntsen, Inc. is a marketer for these items (1-800-356-7388/www.berntsen.com).

Of course, I still caution the church that just because a space is not marked and we have not been able to identify a grave, does not mean that it is open. Unfortunately, the use of a Ground Penetrating Radar (GPR) may not necessarily give you any better results. One of the biggest soil limitations of GPR is clay and rocky soils, of which are both seen in the Cemetery.

The only way to know with any certainty that there is a burial, is to dig. If the Church still wants to examine an area, the proper technique would be to use a track hoe (we have even used a small Bobcat for this work) and take down the soil a couple of inches at a time and look

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for a burial shaft. No coffin or remains should be disturbed. It would be appropriate for an archaeologist, or someone trained in identifying what a grave shaft looks like, to be onsite while the work being performed. I would be happy to discuss this in more detail if you or the Church is interested. It is, however, important to understand that this is an intrusive technique and that the landscape would need to be restored afterwards.

Summary

In conclusion, 192 burials were identified within the two parts of the cemetery. Given the high soil compaction that existing graves exhibit, it is possible that much of the cemetery, at least in the areas close to the church, is filled. Of course, a more detailed history of the Church, including

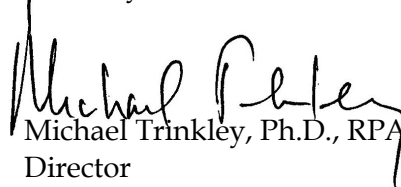
deeds and plats, may be able to shed some light on the cemetery. That, however, is beyond the scope of this work.

Care should be taken if an area is to be opened for use as a modern grave. There is confusion on where existing burials are actually located, so it may be appropriate to stay away from areas close to the church and focus on the outer edges of the cemetery, where it is less likely to encounter unmarked graves.

I am enclosing our invoice for the work at the agreed rate for two days of work.

We appreciate you contacting us and providing the opportunity to work with you. If you have any questions concerning the findings, please contact me at 803/787-6910 or by e-mail at trinkley@chicora.org.

Sincerely,


Michael Trinkley, Ph.D., RPA
Director