Vilas Park Cultural Resources

Discussion of the history of cultural resources in Vilas Park and processes in place to protect them in relation to future construction projects.

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Geology and Development of the Landforms etc.

The land surfaces and lakes that we are familiar with now in the City of Madison began to take their current form following the retreat of Laurentide Ice Sheet from the Great Lakes area about 20,000 years ago. As the glacier retreated, the dragging movement of the heavy ice and force of the melting water created the channel of the Yahara River and the basins of the four lakes. As the ice melt ended, water levels and river courses stabilized, and the four lakes of the Madison area were formed. Temperatures increased at the end of the Ice Age, leading to the vegetation changing from evergreen forests and large marsh areas to the modern types of vegetation was see today including hardwood forests, meadows with stands of oak, and prairies. These types of vegetation and trees are still present around Vilas Park and in the nearby University of Wisconsin Arboretum.

Native American Presence

Native Americans were present in the area that is now the City of Madison for thousands of years before the first documented non-native people from Europe entered the area. The Ho-Chunk people's oral history preserves detailed accounts of their long history in the Madison area before Europeans entered the area. In addition to the accounts of the Ho-Chunk, Native American traditional history and early Euro-American records document the presence of the Menominee, Meskwaki (Sauk), Fox, and Potawatomi peoples in the general Madison area.

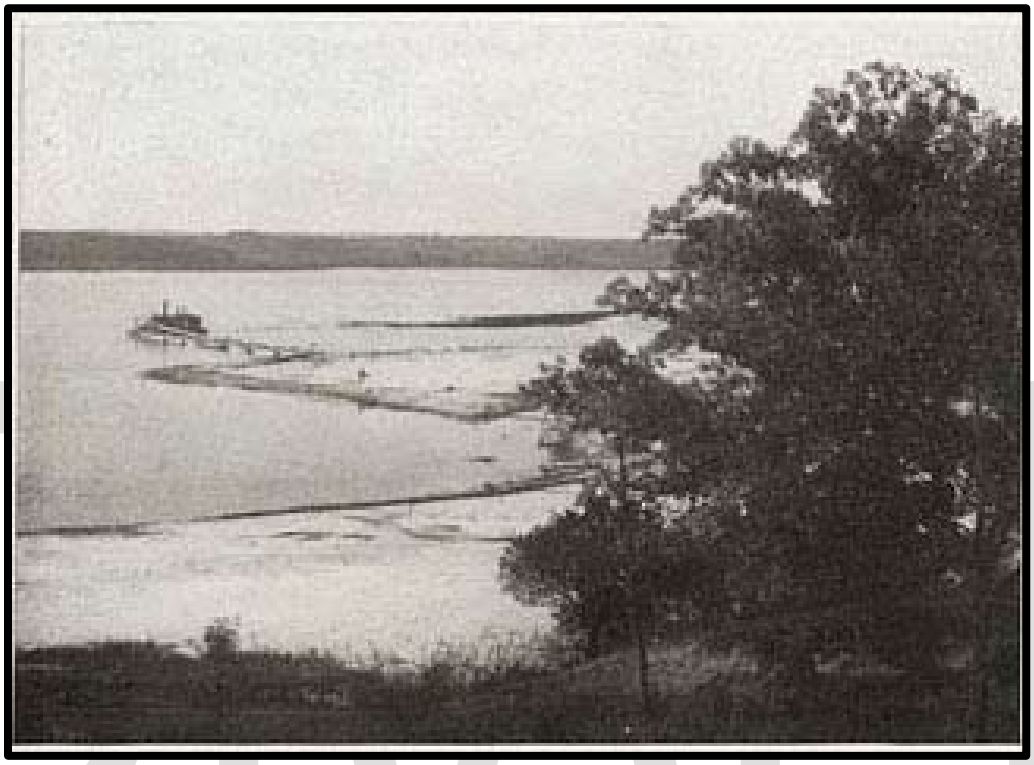
We know from archaeological materials that the early Native Americans in southern Wisconsin were hunters and gathers who harvested naturally available foods such as berries, roots, and seeds. Native Americans in this area also hunted large mammals, which included now extinct mastodons and mammoths, as well as animals no longer present in the area such as Elk. In addition to large animals, these people also hunted smaller mammals, birds, reptiles such as turtles and fish using bow and arrow, nets, spears, and traps.

In the early 20th century, State Historical Society of Wisconsin archaeologist Charles E. Brown documented Native Americans in the Madison area, as well as the sites of what are now Vilas Park and Lake Winga. In articles and personal notes on archaeology in the Madison area, Brown described the importance of Lake Wingra to Native Americans, known by the Ho-Chunk as *Kichunkochheperrah* or "Where the turtle rises up". Brown reported that the Ho-Chunk frequented the general area of Lake Wingra and had campsites and villages in the areas of higher ground on the northern and eastern shores of the lake where Vilas Park and the Henry Vilas Zoo are now located.

Prior to the early 1900s, the main area of Vilas Park and edges of Lake Wingra were tamarack marsh with some areas of open water. Early maps of the area from surveys made in 1834 show that the northern shore Lake Wingra was located much farther north than its current location (Images). Maps from 1904 also show this area as part of the lake and open water/marsh.

In addition to early maps and survey records, historical records and photographs from the Madison Park and Pleasure Drive Association document where open water and marsh were located prior to 1906. Historical publications and records of the Madison Park and Pleasure Drive Association and from Brown record that 35 acres of "bog" were dredged and then filled in with materials left over

from quarrying of limestone and with silt and marl from the dredging. Most of the western area where Vilas Park is now located was created after being filled in. A photograph dating to 1906 shows a dredge barge operating in Lake Wingra and shows the large areas of open water after the marsh vegetation and marsh has been cleared away and dredging had started.



1906 Image showing dredging and filling of open water area in the location of Vilas Park. Photograph most likely was taken from Vilas Avenue looking south/southwest (Madison Park and Pleasure Drive Association Image).

Since the time Brown documented the villages and campsite area, archaeologists have conducted several studies in Vilas Park. In 2017 the soil around the approaches to the pedestrian bridge located over the lagoon was examined by archaeologists and was found to consist of fill materials and marl that were deposited to cover wetlands and create dry land for the park area.

The data recorded in this study supports the idea that most of the park area extending to the northern shore of Lake Wingra was created with fill from dredged soil. Archaeological materials and sites are now most likely under several feet of soil that were originally the lake bottom and shallow marsh areas.

Map showing the northern extent of Lake Wingra in 1904 prior to dredging and filling in of the area that became Vilas Park (Anson 1904). Note that "Jackson Street" was renamed to "Vilas Avenue."

Map from the original 1834 survey of the Wisconsin Territory showing the extent of open water (most likely marsh) on north shore of Lake Wingra (GLO).

Archaeological and Cultural Resources Review for Park Development Projects

Wisconsin has long been a leader in efforts to preserve Native American archaeological sites and mounds. Since the late middle of the 19th century and the founding of the State Historical Society of Wisconsin in 1848, efforts have been made to record and protect cultural resources. During the early 20th century, the archaeologist Charles E. Brown was the museum director for the State Historical Society of Wisconsin. Brown was a pioneer in preservation efforts in Wisconsin to save Native American mounds and archaeological sites from destruction, including those in the Madison and Lake Wingra areas and the mounds and archaeological sites in Vilas Park and the Henry Villas Zoo.

During the 1950s, a large body of federal and state laws began to be put in place that were designed to protect archaeological sites and other cultural resources. These laws evolved to eventually become incorporated into Section 106 of the National Historic Preservation Act and the creation of the National Register of Historic Places in 1966 which was overseen and managed by the United States Park Service. The majority of work involving compliance and the enforcement of the federal laws were delegated to the states and regulated through state historical societies or historic preservation officers.

In addition to federal laws, states also created legislation to protect archaeological sites and other cultural resources. In Wisconsin, state Statues 44.40 and 157.70 are the main laws regulating historic preservation and the protection of human burials.

Many counties and municipalities also have local ordinances and guidelines in place to help to protect and preserve archaeological sites and historical buildings. These laws and regulations are in place and often require evaluation of the potential effects of planned construction activities involving ground disturbance on archaeological sites or other historical locations prior to the start of construction activities.

Vilas Park is under the management of the City of Madison. The City of Madison has guidelines in place for allowing construction projects to begin, and the City follows state and local laws for any ground disturbing construction planned to occur in areas of archaeological sites. Prior to permitting construction, city and state agencies will often require a cultural resources background check and that this be completed by a professional archaeologist. The background check entails research of records of known locations of archaeological and historical sites within the area of planned ground disturbance and researching documents for evidence of unreported resources. The archaeologist will typically consult with the State Historical Society of Wisconsin, Native American Tribal representatives, and other concerned parties about the planned project and potential effects to known archaeological sites.

Following background research, a field investigation is usually required in the general area of the planned construction to identify the presence or absence of archaeological sites and materials. During the field investigation, the archaeologist will test soils in the planned project area looking for

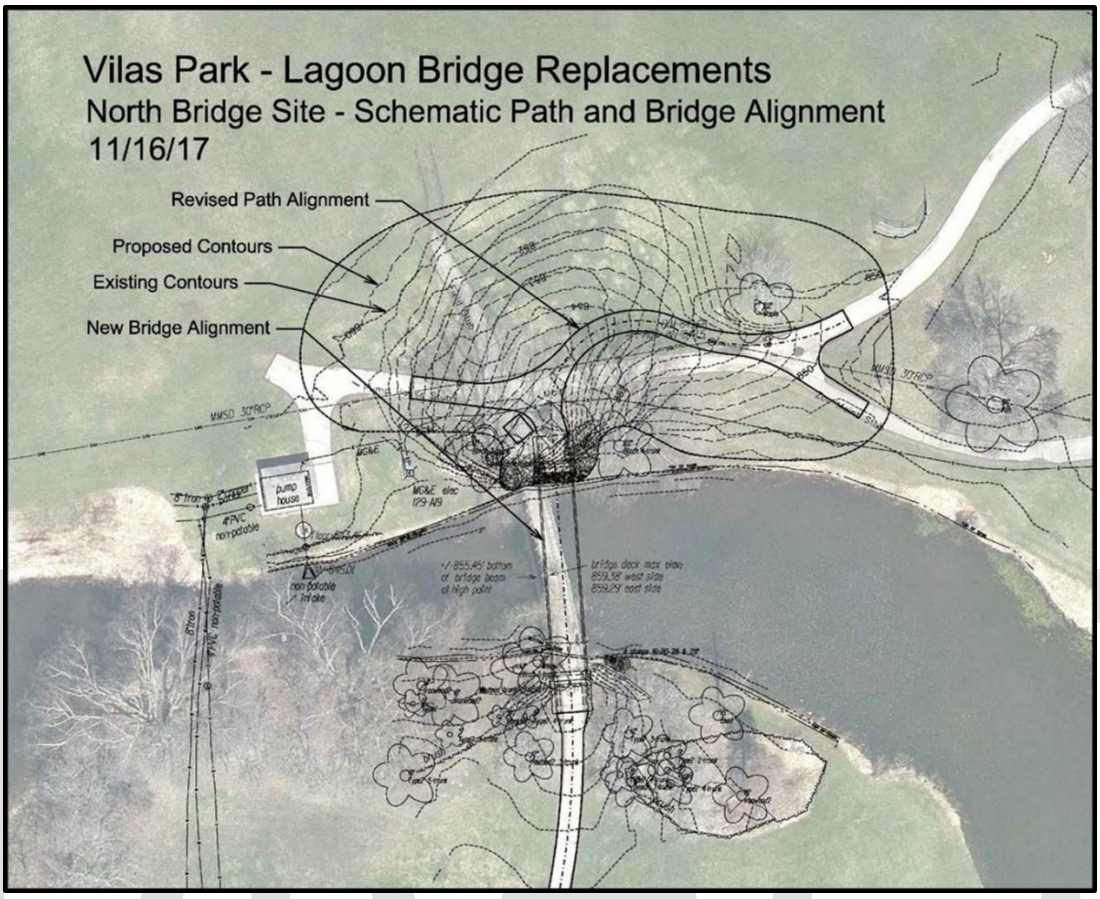
archaeological materials. The archaeologist will evaluate the possibility that prehistoric and historic period artifacts may remain intact within the soils of the planned construction area.

A past project within Vilas Park can be used to illustrate the compliance process. In 2017, the City of Madison Parks Division worked with City Engineering to replace two bridges located within Vilas Park. One of the planned construction areas was located partially within the boundaries of two reported Native American archaeological sites.

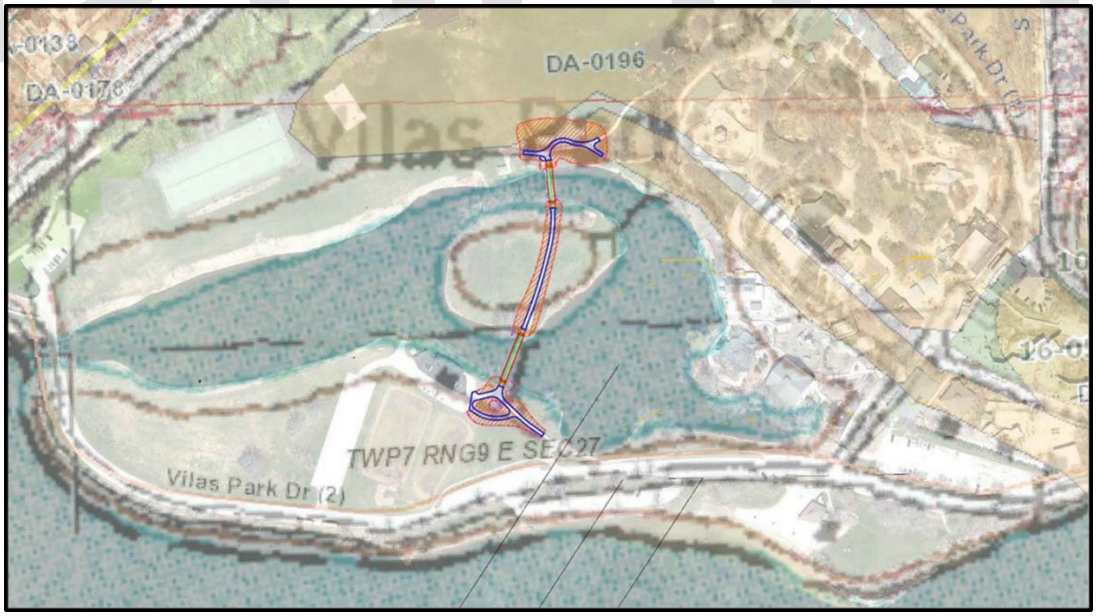
Following state laws and guidelines of the City of Madison for protecting archaeological sites, the City of Madison hired a professional archaeologist to conduct research and to determine if the planned construction would disturb the reported archaeological sites or any other historical cultural resources that had not previously been identified. The preconstruction process also involved public meetings that allowed for local involvement in the planning process as well as the notification of Native American Tribal representatives of the proposed project.

The archaeologist first took all of the design drawings and descriptions of the planned ground disturbance and overlaid these drawings on the previously drawn maps of archaeological sites in the area, as well as over historical imagery and maps documenting previous ground disturbance that had occurred in the local area.

The archaeologist found that the planned construction entered into the areas of two previously reported archaeological sites. Following consultation with the State Historic Preservation office, a background search followed by a field investigation was done for the areas of planned ground disturbance prior to the construction being allowed to begin. A review of previous information on the area revealed that the planned construction would occur within the location of dredging and heavy ground disturbance that occurred in the early 20th century (See section above). This information was used during soil testing of the planned construction area.



Planned construction activities plotted on satellite imagery (City of Madison).



Planned construction activities superimposed on database layer showing previously reported archaeological sites and other locations of historical interest (State Historical Society of Wisconsin).

During the field investigation, the archaeologist excavated soil cores and small test pits to examine the soil types and stratigraphy. The investigation revealed that the soils present in the area of planned construction did not display well defined horizontal layers that are typically found when soil is naturally deposited over time. These observations supported the evidence from early 20th century photos and documents that the soil had been placed there in the early 1900s to create a level surface above the water level of the lagoon and Lake Wingra.

As a result of the investigation, it was determined that prior to the early 20th century, the area had been in open water or marsh and the soils which would be disturbed to facilitate the planned bridge replacement were not naturally deposited. Therefore, it was unlikely that the proposed construction would disturb archaeological materials.

The archaeologist prepared a final report of their findings and submitted it to the State Historical Society for review. The State Historical Society agreed that the planned project did not have the potential to disturb the reported archaeological sites or intact archaeological materials and allowed the construction to continue. Construction was completed in 2018, and no archaeological materials were found.

Construction Archaeological Monitoring Process

During the 2017 project described above, the archaeologist found that the soils which would be disturbed during the planned construction had been deposited there in the early 20th century. The soils near the bridge did not have the potential to contain archaeological materials and could not have been part of the two previously reported precontact archaeological sites. As a result of the investigation, the construction was allowed to proceed without further investigations or the requirement that ground disturbance be observed by an archaeologist.

During future construction projects within Vilas Park, similar investigations will take place prior to the permitting of ground disturbance. While the area on the north side of the bridge project was determined to be fill and not naturally deposited soils, this may not be the case for the entire park. Other areas of the park have the potential for undisturbed soils to be present under more shallow layers of fill soils, or in areas where fill soils were never deposited over the natural ground surfaces. These areas may contain intact archaeological materials. In those cases, all ground disturbing construction will be required to be observed by a professional archaeologist. In the case of areas that may contain human remains, the archaeologist must be authorized to work with human remains by the State Historical Society of Wisconsin.

These observations entail supervision by the archaeologist of all of the ground disturbing activities until the grading or excavation work is completed or the archaeologist has determined monitoring is no longer needed based on site conditions. If archaeological materials are found, the work will be stopped immediately, and the City of Madison will consult with the archaeologist, State Historical Society and Native American Tribal representatives to determine best path forward. Potential acceptable options include project redesign or modification, cancelling the project or working with an archaeologist to relocate the archeological materials.

Archeological Review Process for Planned Projects at Vilas Park

Madison Parks recognizes that Vilas Park contains some of the richest archaeological resources in the state and is committed to responsibly stewarding this sacred land. For any work done in Vilas Park, Madison Parks will utilize utmost care and adhere to any and all conditions set forth by the Wisconsin Historical Society and in accordance with preservation statues such as Wisc. Stat. 157.70 and any other sections referenced therein.

All projects concerning ground disturbance within Vilas Park will be subject to the following process.

	Steps to Protect Archeological Resources at Vilas Park
1	Conduct a Literature Review
2	Conduct a Geomorphological Review of Vilas Park
3	Define Project Areas in the Vilas Park Master Plan
4	Consult with the Wisconsin Historical Society, Native American Tribes, and Other Concerned Parties about the Project Area
5	Obtain Required Permits
6	Perform Initial Analysis Using Ground Penetrating Radar of Project Area
7	Create the Preliminary Project Design to Determine Project Scope
8	Create the Project Design to Determine Specific Ground Disturbance
9	Obtain Required Permits
10	Conduct Phase 1 Shovel Testing of Project Area where required by the State Historical Society
11	Post Authorization to Proceed
12	Commence Construction
13	Conduct Archaeological Monitoring During Construction as Required

1. **Conduct a Literature Review**

   The Parks Division will hire an archaeologist to review all available information concerning known archaeological sites and Native American burial locations within Vilas Park and will search for information on previously undocumented archaeological sites. The archaeologist will also review past reports for earlier archaeological investigations that occurred within Vilas Park.

2. **Geomorphological Review of Vilas Park**

   Geomorphologists are scientists who study the Earth's surface, including how it is formed and changed by natural processes and human activities. Prior to any additional planning efforts Madison Parks will consult with a Geomorphologist to determine the location and approximate depths of original soils in Vilas Park with the goal of identifying the location and depth of fill material and native soils. This study will provide overall information for the park which can be used for each individual project area.

3. **Define Project Areas in the Vilas Park Master Plan**

   Madison Parks will define the Project Area limits for proposed individual projects identified by the Vilas Park Master Plan that may be subject to ground disturbance during construction. Note that not all improvements identified within the Vilas Park Master Plan will be constructed at once and some may not be constructed for many years. Therefore, Project Areas will be identified as projects are scheduled to be constructed in the near future.

4. **Consult with the Wisconsin Historical Society, Native American Tribes, and Other Concerned Parties about the Project Area**

   The Parks Division will consult with the Wisconsin Historical Society, Native American Tribes, Madison Landmarks Commission, and other concerned parties. Depending on the results of consultation, if required, the City Parks Division will hire a professional archaeologist to assist the Parks Division in meeting state and local historical preservation laws and guidelines. The Parks Division will adjust the design plans as necessary. Consultation with the parties indicated above will continue through the entirety of the project. Parks Division staff will encourage their participation in the planning process and final design of the project.

5. **Obtain Required Permits**

   Madison Parks will obtain the required permits from the Wisconsin Historical Society and/or other State Agencies in advance of any archaeological work, including Ground Penetrating Radar surveys.

6. **Survey Project Area Using Ground Penetrating Radar**

   Once a Project Area has been identified, Madison Parks will hire a qualified Ground Penetrating Radar professional to survey the entirety of the selected Project Area. The consultant must have professional experience using Ground Penetrating Radar to identify potential archaeological resources.

7. **Create the Preliminary Project Design to Determine Project Scope**

   Parks Division staff will commence preliminary design once steps 1-5 outlined above are complete. Parks Division staff will modify and adjust the design to limit conflict with and avoid impact on archaeological resources within the Project Area. Parks Division staff will seek input and feedback from the public and relevant concerned parties on the preliminary design by hosting a public meeting.

8. **Create the Project Design to Determine Specific Ground Disturbance**

   During this step, the Parks Division staff will incorporate public and concerned party input on the preliminary design, along with any findings from steps 1-4 above, into the final

designs of the Project Area. Parks Division staff will use this final design to determine the specific locations within the Project Area that will require ground disturbance, and the depths of excavation anticipated to be needed for the project. Parks Division staff will seek input from the public and relevant concerned parties on the final design.

9. **Obtain Required Permits**

   Madison Parks will obtain the required permits from the Wisconsin Historical Society, Madison Landmarks Commission, and/or other State Agencies. Due to the richness of archaeological resources in Vilas Park, in Project Areas not currently mapped as archaeological sites, the Parks Division will obtain documentation that meets compliance conditions set forth by the State Historical Society. For properties that are designated as City of Madison Landmarks, the Madison Parks or the archeologist will secure a Certificate of Appropriateness.

10. **Conduct Phase 1 Shovel Testing of Project Area where required by the State Historical Society**

    As part of the permit review, the Wisconsin Historical Society may require Madison Parks to hire a professional Archaeologist to conduct Phase 1 shovel testing of the selected Project Area. Shovel test locations will focus on areas identified to be excavated during construction. The investigation will conduct sampling of the project area by excavating small hand test pits and screening all soils through ¼ inch mesh. The archaeologist and Parks Division will secure required permits to conduct archaeological investigations on public lands. If Ground Penetrating Radar readings suggest archaeological resources are likely to be in the soil, those specific areas will be avoided for shovel testing. The study will be done following the guidelines of the Wisconsin Archaeological Society for conducting archaeological research in Wisconsin.

    If archaeological materials are found, all work will cease and the State Historical Society and other concerned parties, such as Native American Tribal representatives, will be consulted for mitigation per Wisc. Stat. 157.70.

    The Archaeologist will prepare a final report documenting their findings and the results of the field investigation. The archaeologist can make recommendations for additional investigations, that the project be modified to avoid archaeological deposits or, if nothing was found, that the project be allowed to continue as planned. The final archaeological report will be filed with the Preservation Planner to be included in the City's preservation files for the property, and Parks Division staff will inform the State Historical Society, Native American Tribes, and other concerned parties regarding the findings.

11. **Post Authorization to Proceed**

    Prior to any construction work commencing, the Parks Division will obtain and post a permit or a letter from the Wisconsin Historical Society office indicated that the work may proceed.

12. **Commence Construction**

    Construction may commence once a final design has been completed, and all necessary permits are obtained. All staff and contractors working on site will be trained in the importance of preserving archaeological resources. These individuals must understand the conditions required within the permits. The Parks Division Project Manager will be responsible for ensuring compliance with conditions.

13. **Conduct Archaeological Monitoring During Construction as Required**

    Archaeological monitoring may be required for sites of human burials when ground disturbing activities are occurring, per Wisc. Stat. 157.70 per conditions set forth by the State Historical Society. Madison Parks will comply with all conditions set forth by the State Historical Society. Madison Parks will also notify Ho-Chunk Nation of Wisconsin representatives and allow for Tribal Monitoring alongside the Archaeologist, if desired by Ho-Chunk representatives.

    If archaeological materials are observed during monitoring, all work will come to a halt and the State Historical Society and other concerned parties such as Native American Tribal representatives will be consulted prior to work continuing. Depending on what is found, the work may be halted to allow for a new archaeological investigation to be done to recover information and archaeological materials before the construction is allowed to continue. Depending on the nature of what is found, the project may be redesigned or relocated to avoid impact to the archaeological site. The timeframes required for the above noted process will follow Wisc. Stat. 157.70.

    If no archaeological materials are found during monitoring of the ground disturbing construction, the archaeologist will prepare a final report to be submitted and reviewed by the State Historical Society of Wisconsin. After reviewing the report, the State Historical Society of Wisconsin will comment on the findings of the report and request additional information or will close the case.

Madison Parks recognizes there is a great deal of unknown involved in implementing the improvements identified in the Vilas Park Master Plan. Throughout the design, development, and construction of individual projects, Madison Parks will consult with archaeological experts, evaluate the process and reevaluate decisions at each step along the project based on findings of each encounter. Madison Parks is committed to implementing projects in a way that requires the least amount of disruption to the archaeological resources contained in Vilas Park.