



**SPECIAL PROVISIONS
FOR
CULTURAL RESOURCES**

**Lee County
STBG-SWAP-2697(628)--SG-56**

**Effective Date
July 16, 2019**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

155034.01 DESCRIPTION.

- A.** This part of the Specifications includes information on how cultural resources within the project area will be handled during construction as reference information to the contractor.
- B.** The information provided in the Memorandum of Agreement between the Iowa State Historic Preservation Office, City of Fort Madison, the Office of the State Archaeologist, and the Iowa Department of Transportation regarding Avenue H / Business 61 Reconstruction is provided for reference only to the Contractor.

Memorandum of Agreement
R&C#181056045 –Fort Madison, Iowa

MEMORANDUM OF AGREEMENT

Between
The Iowa Department of Transportation,
Iowa State Historic Preservation Office,
City of Fort Madison,
And the Office of the State Archaeologist
Regarding

Avenue H / Business 61 Reconstruction (Site 13LE10)

STPG-SWAP-2697(628)--SG-56
Iowa SHPO R&C# 20181056045

WHEREAS, the City of Fort Madison (CFM) qualifies for State of Iowa funding administered by the Iowa Department of Transportation (DOT) through the Federal Aid Swap Program (Grant STPG-SWAP-2697(628)--SG-56) to make certain infrastructure repairs and upgrades within the corporate limits of Fort Madison, Iowa; and,

WHEREAS, the CFM in consultation with the DOT has determined that a portion of the grading and reconstruction of Avenue H / Business 61 from 2nd Street to 6th Street, may have an adverse effect upon Site 13LE10 which is listed on the National Register of Historic Places (NRHP); and,

WHEREAS, the CFM has consulted with the Iowa State Historic Preservation Officer (SHPO) pursuant to Iowa Code 314.24 and procedures established in DOT's Instructional Memorandum (I.M.4.120) and has invited the SHPO to participate in this Memorandum of Agreement (MOA); and,

WHEREAS, the CFM has consulted with the Office of the State Archaeologist (OSA) and have invited the OSA to participate as a signatory to this MOA pursuant to Iowa Code 263B.5 and procedures established in I.M.4.120; and,

WHEREAS, the signatories agree that the portion of the project that may have an adverse effect upon 13LE10, and is subject to this agreement includes an area of approximately 0.87 acres (37,900 square feet) as shown in Attachment 1, which is the area where Avenue H, Business 61 traverses Historic Site 13LE10, with a maximum depth of construction up to 11 feet 2 inches; and,

WHEREAS, the signatories agree that approximately 1,722 square feet of brick pavers along 4th Street will be saved, securely stored during construction, and replaced using the same pattern as the original construction of 4th Street. Pavers too damaged to be reused will be replaced with examples approximating the originals in size, color, and material; and,

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WHEREAS, the DOT has consulted with the Flandreau Santee Sioux; Ho-Chunk Nation; Iowa Tribe of Kansas and Nebraska; Iowa Tribe of Oklahoma; Miami Tribe of Oklahoma; Omaha Tribe of Nebraska; Osage Nation; Otoe-Missouri Tribe; Peoria Tribe of Indians of Oklahoma; Ponca Tribe of Nebraska; Prairie Band Potawatomi Nation; Prairie Island Indian Community; Sac and Fox Nation of Oklahoma; Sac and Fox Tribe of the Mississippi in Iowa; Santee Sioux Nation; Sisseton – Wahpeton Oyate; Spirit Lake Tribe; Three Affiliated Tribes – Mandan, Hidatsa & Arikara; Upper Sioux Community; Winnebago Tribe of Nebraska; and Yankton Sioux Tribe; regarding the effects of the project on historic properties and have been invited to sign this MOA; and,

WHEREAS, the DOT has consulted with the Fort Madison Historic Preservation Commission, the North Lee County Historical Society and the Lee County Historical Society regarding the effects of the project on historic properties and have been invited to sign this MOA; and,

WHEREAS, the signatories agree that it is in the public interest to expend funds to implement this project through monitoring of the site prior to construction of the project; and,

WHEREAS, other than those described in this MOA, no other resources, historical, architectural or archaeologically eligible for the National Register will be impacted by the proposed project; and

WHEREAS, this MOA is binding upon the signatories hereto not as individuals, but solely in their capacities as officials of their respective organizations, and acknowledges proper action of the CFM, DOT, SHPO and OSA to enter into the same; and

NOW, THEREFORE, the CFM is responsible for implementing these terms and conditions in a timely manner and with adequate resources.

STIPULATIONS

The DOT shall ensure that the CFM, in consultation with the signatories, shall carry out the following measures:

A. Project Monitoring

1. The CFM will hire a Secretary of the Interior qualified archaeologist (project archaeologist) to monitor the removal of pavement and disturbed sediments mantling intact soil horizons potentially holding intact archaeological deposits, including burial pits within the 0.87-acre area (from Sta. 357+42.34 to Sta. 362+64.52) to a maximum depth of 11 feet 2 inches. If suspected human remains or graves are exposed, the monitor shall have the authority to halt construction for sufficient time to ensure they are adequately protected per the Data Recovery Plan (Attachment 2). This time will be

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utilized to notify the necessary authorities, including local law enforcement, the OSA, SHPO, and the State Medical Examiner (per Iowa Code sections 523I.316(6), 685-11.1).

2. The CFM is responsible for the removal of pavement and overburden within the 0.87-acre project area early on during the construction process. The early removal will allow the archaeologist sufficient time for the identification of human remains/burials that may be exposed by the excavation of the project. Human remains that are not exposed by the excavation of this project will be left in place and undisturbed.
3. The CFM is responsible to see that the project archaeologist completes a report documenting the results of the monitoring and submits it to SHPO and OSA within sixty (60) days after completion of the monitoring.
4. The CFM is responsible for having the project archaeologist communicate at a minimum weekly by email, once the project starts, to the parties in this agreement regarding finds, site conditions and construction/demolition monitoring progress.

B. Discovery Plan for Human Remains/Graves

All parties agree that a Discovery Plan for Human Remains is a critical component of this agreement. The Iowa Code protects all human burials in the state of Iowa. Ancient remains (150 years in age and older) are protected under Chapter 263B, 523I.316(6), 685-11.1, (3-7) and 716.5 of the Iowa Code. The CFM is responsible for carrying out this plan -upon the event that human remains are exposed during construction activities:

1. Throughout the monitoring project the project archaeologist will communicate with OSA's Bioarchaeology Director. If human remains or bone suspected to be human are identified, project activities will stop and the OSA's Bioarchaeology Director will review the remains within two business days. No additional ground disturbance shall occur within a 50-foot buffer zone around the remains. All elements exposed must be left in place and protected against theft, vandalism, and weather.
2. The Bioarchaeology Director will use standard non-destructive osteological analyses to provide baseline information on individuals' ancestry, sex, and age. Human remains that are not exposed by the excavation of this project will be left in place and undisturbed.
3. The signatories will then review the project on site to make a determination about the remains and decide how best to move forward. If determined to be of Native American ancestry the appropriate Tribal governments will be notified and invited to consult. Human remains that are not exposed by the excavation of this project will be left in place and undisturbed.
4. Human remains and associated artifacts will be treated with the utmost respect and dignity. If removed, human remains will not be contained with unassociated

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historic/prehistoric artifacts but will be kept separate in acid free field containers and reposed at the OSA until the reburial event is completed. The reburial will occur at a location selected by the appropriate parties upon completion of the project. Any human remains encountered during this project are under the control of the OSA and descendant communities (if identifiable). Per the Iowa Code (Ch 11, 685-11.1(5)) the OSA must coordinate actions involving recordation, removal and reburial of ancient remains, but is not financially responsible for these actions.

If discovered human remains are established as less than 150 years old, they are legally protected under Chapters 113.34, 144.34, 523I.316, 56 and 716.5 of the Iowa Code and the Iowa Department of Health must be notified.

C. Discovery Plan for Non-Burial Artifacts

1. If construction work exposes previously undetected archaeological materials, the project archaeologist retained by the CFM, will immediately inspect the work site and determine the extent of the affected resource per the Data Recovery Plan (Attachment 2).
2. Non-burial artifacts that are not exposed by the excavation of this project will be left in place and undisturbed.
3. The CFM is responsible for the costs resulting from the monitoring and data recovery efforts of this project. The non-burial artifacts found will be given to the North Lee County Historical Society for curation with the existing Fort Madison collection.

D. Amendments

1. Other than modification or termination by operation of law, this Agreement may be modified only by the mutual assent of all parties. Proposed amendments shall be presented in formal written format. Upon notification of intent to amend, the signatories shall have seven (7) working days to review and request revisions to the draft amendment. Signatories shall have an additional three (3) working days to consider all proposed revisions after which the signatories, upon unanimous consent, may: 1) circulate for signature; 2) enter into a second round of review and revision (3 days); 3) abandon the amendment and take no further action; or, 4. redraft the amendment in its entirety (7 days) followed by 3-day review and revision by the signatories. Disagreements occurring during the amendment process shall be addressed in accordance with the Dispute Resolution (Stipulation E.1)

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E. Dispute Resolution

1. Should any signatory or concurring party to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, the disputants shall consult to resolve the objection. If, within 30 days of the initiation of such consultation, the disputants determine that such objection cannot be resolved among themselves, they will:
 - A. Forward all documentation relevant to the dispute including proposals for resolutions to the DOT. The DOT shall have 30 days to consider all sides of the dispute and their respective proposals for resolution, weigh each with regard to project goals and the objectives of this MOA, then make a final decision to settle the dispute based upon merit of achieving project goals and objectives of this MOA.
2. Disputes regarding the disposition and treatment of ancient human remains fall within the legal jurisdiction of the State Archaeologist whose decision is final.
3. The CFM's responsibility to carry out all other actions subject to the terms of this MOA that are not subject of the dispute remain unchanged.

F. Termination

1. If any signatory to this MOA determines that it will not or cannot reasonably carry out its terms, that party shall immediately consult with the other parties in good faith to attempt to develop an amendment per Stipulation D above or to resolve any outstanding dispute per Stipulation E above. If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA for good cause upon written notification to the other signatories; however, notwithstanding this provision, the DOT reserves the right to withhold the reimbursement and/or disbursement of funds to CFM in the event CFM fails to carry out its duties under this MOA prior to the project's completion.
2. The terms of the agreement will be reviewed to determine if revisions are needed if its terms are not carried out within five (5) years from the date of its execution.

Execution of this Memorandum of Agreement by the CFM, DOT, SHPO, and OSA is evidence that the CFM has taken into account the effects of the project on Site 13LE10.

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By: _____
Iowa Department of Transportation

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Signatory:

By: _____
State Archaeologist

_____ *Date*

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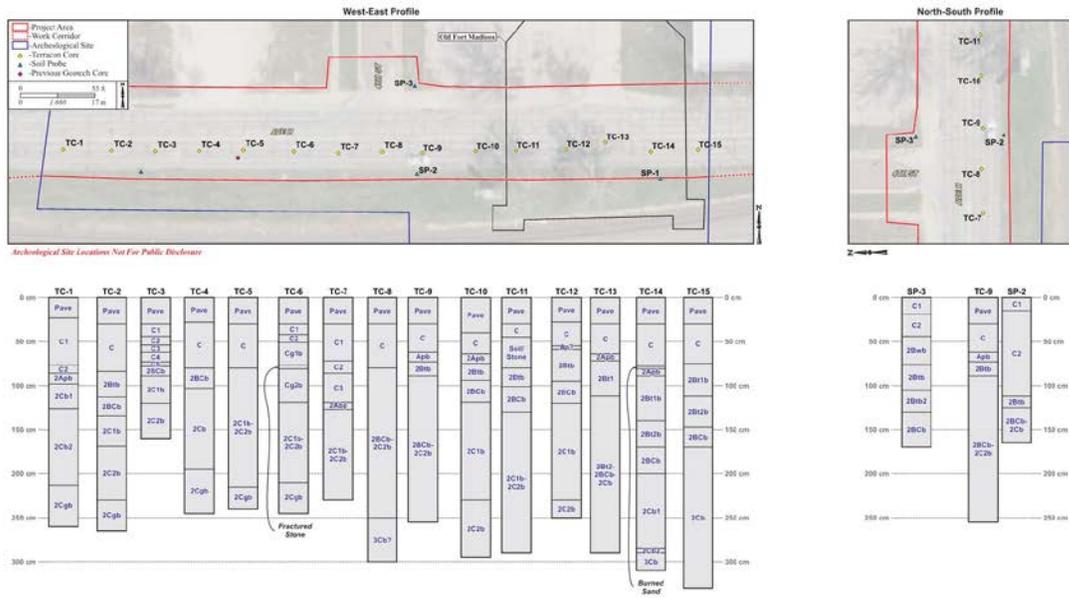


Figure 4. Diagram of soil profiles west-east on Avenue H and north-south near the 4th Street intersection.

PLAN FOR ADDITIONAL INVESTIGATIONS AND ARCHEOLOGICAL DATA
RECOVERY ON OLD FORT MADISON AND BATTLEFIELD (13LE10)
UNDER AVENUE H WITHIN THE CITY OF FORT MADISON, IOWA

STPG-SWAP-2697(628)--SG-56
Iowa SHPO R&C #20181056045

Bear Creek Archeology, Inc.
Cresco, Iowa

April 23, 2019

Prepared in response to a request for a Scope of Work (SOW) from HR Green, Inc. (HRG) of Cedar Rapids, Iowa, the following document outlines an approach for 1) determining if intact remains from Old Fort Madison and Battlefield (13LE10), listed on the National Register of Historic Places (NRHP; listed 1973, updated listing 2018; Collins and Whittaker 2017; Hesse 1972), are extant underneath Avenue H (Business 61) within the City of Fort Madison, Lee County, Iowa, and 2) a plan for Phase III data recovery to mitigate adverse effects from proposed road reconstruction if intact archeological deposits are identified.

Site 13LE10 is in the NW¼, NW¼, SW¼ of Section 3, T67N, R4W, Madison Township, Lee County, Iowa (Figure 1). The area under proposed investigation is in the southern quarter of the site footprint and lies within proposed road improvements along Avenue H beginning near the 2nd Street intersection and extending westward to 6th Street. However, the proposed work focuses primarily on where the project corridor crosses the current site boundary of 13LE10 straddling each side of the 4th Street and Avenue H intersection (Figure 2). In the following sections, a brief historic background of 13LE10 and previous investigations is presented followed by a SOW having two purposes: 1) to determine if intact archeological deposits associated with 13LE10 are present under the Avenue H roadbed and 2) the implementation of a data recovery plan to mitigate adverse effects from proposed construction if evidence for intact archeological deposits are found.

HISTORIC BACKGROUND

Site 13LE10 is the location of a War of 1812-era military fort and associated battlefield on the banks of the Mississippi River within what is now the community of Fort Madison. First of the U.S. military forts on the upper part of the Mississippi River, the fort was constructed on a Late Pleistocene alluvial terrace with a moderately deep ravine incised into the terrace about 50 m (164 ft) west of the more distant valley bluff line and other elevated settings overlooking from the north. Both the bluff and ravine provided suitable protection as siege locations for Native Americans (backed by the British) opposed to the fort's presence. After multiple siege events, including the shooting of flaming arrows onto roofs, the fort was finally abandoned and intentionally burned in September 1813.

Even though remains were reportedly visible as late as the 1850s (McKusick 1980, 2009), the historic fort was not reidentified until the mid-1960s by then State Archaeologist Marshall McKusick. Since that time archeologists have undertaken sporadic investigations on portions of the fort. A few of the earlier investigations probed the fort's footprint (e.g., Hansman 1987; McKusick 1980) and, more recently, a battlefield immediately to the west was identified (Artz et al. 2011). The most recent investigation involved determining the geologic potential for intact cultural remains beneath Avenue H where it crosses the 13LE10 footprint (Thompson and Blikre 2018). More widely available publications on the fort's archeology and history, some in conjunction with the 200th anniversary of the War of 1812, include Artz et al. (2012), Doershuk et al. (2012), Hansman (2009), and McKusick (2009).

Previous investigations have found widespread evidence for intact archeological deposits dating to the first few decades of the nineteenth century, making Old Fort Madison one of the few, if not the only intact Iowa site associated with the War of 1812 (Credit Island in Davenport, if intact archeological deposits exist, may be an exception). While most investigations on the fort focused on environs within former building and parking lots north of Avenue H in the vicinity of the Officers' quarters, or the battlefield east of 4th Street, McKusick (1980:109) in the 1960s examined environs closer to the proposed investigation area. For example, removal of a sidewalk bordering Avenue H found immediately below the surface a linear blackened stain and charred post stumps of the west wall from the stockade originally encircling the fort. His description of the stockade south of Blockhouse 3 reveals how it was constructed:

...the remnants of stockade posts were clearly defined against the construction pit. These posts had been set into a trench rather than individual post holes. This fitted the description of the stockade very well. It was described as being built of logs adzed off on opposite sides to fit together. It was more sensible to set posts together along a trench subsequently refilled than to dig individual post holes. The stockade posts were completely charred even below the ground, demonstrating the heat of the final fire which destroyed the fort. It was difficult to trace the stockade very far into the wall of the construction pit because of the overlying parking lot gravel and asphalt. However, we did follow them into the wall sufficiently to see that one post was set behind the other in a line. [McKusick 1980:100–101]

Depth of stockade trenches varied but a general soil profile drawing indicated a post extending to a depth of approximately 1 m (3.3 ft) below the presumed original ground surface (McKusick 1980:98). Also found in the vicinity of the western stockade wall was a pile of stone, and when cleared of overburden were revealed as the remains of a fireplace in the Enlisted Men's barracks. Approximately 6.1 x 24.4 m (20 x 80 ft) in size, this rectangular-shaped building parallels the west stockade wall with its footprint crossed by Avenue H. The proposed undertaking crosses the barrack's location near the building mid-point (four sleeping rooms were likely on the second floor while the first level was used as mess and common rooms). While evidence for an internal fireplace (one of perhaps four) was found, other structural remains from the building were scant. For example, a burned log fragment east of the fireplace was presumed to represent a small structural beam or other building support but no evidence for an exterior wall or stone foundation was uncovered. It is possible this structure had no formal foundation but instead was anchored by posts sunk into the ground (McKusick 1980:109). However, other buildings, including the

Officers' quarters and minimally the rear blockhouse, had limestone block foundations. Descriptions of the former left little doubt that the Officers' quarters were decidedly better constructed, more air tight to retain heat better, and overall more luxurious than those provided to enlisted men (McKusick 1980:113–124, 156).

More recently, personnel from BCA advanced 15 solid-tube cores along a single transect at approximately 10 m (32.8 ft) intervals east–west across the southern end of 13LE10 to determine if native soil horizons remained sufficiently intact to potentially hold remains of the fort, cultural features, and midden archeological deposits (Thompson and Blikre 2018). These cores were placed south of the road centerline in order to avoid the water and storm sewer trenches that are present mainly on the northern side of the road. The pre-settlement surface soil formed under trees and originally had a generally thin profile (e.g., upper horizons of A-E-Bt/Bw). Avenue H coring, supplemented by four hand probes in the road right-of-way, found widespread deposits of historic fill over intact B horizons on the Kingston terrace holding the fort but similar horizons were less common on colluvial slopes to the west. Although this work suggested that an extensive or thick midden associated with the fort location where Avenue H crosses the Kingston terrace was unlikely, a potential for intrusive cultural features (e.g., foundations, pits, etc.) did exist. Because of this potential and because 13LE10 is listed on the NRHP, BCA recommended “consultation with state officials to create a plan for dealing with potential historic graves within 13LE10, and archeological monitoring of removal of pavement and overburden on Avenue H early during the construction project (if not prior) where it crosses the site to check for intact archeological features, including burial pits” (Thompson and Blikre 2018).

SCOPE OF WORK

The Avenue H reconstruction is to consist of the removal and replacement of the existing road surface and the installation of new utility corridors (Figure 3). For this project, BCA proposes to first conduct archeological monitoring of the machine removal of the pavement and underlying road fill of Avenue H where it crosses 13LE10. BCA will implement this monitoring following Association of Iowa Archaeologists (AIA) Guidelines (2018). BCA personnel reviewed background literature (landscape and environmental data, earlier investigations, publications and records summarizing the Old Fort Madison history, etc.) in advance of geologic drilling on the southern end of 13LE10 in fall 2018. Prior to beginning the fieldwork, these materials will again be examined with additional data collected if needed. BCA will also consult with personnel from the State Historic Preservation Office, Office of the State Archaeologist (including the Bioarchaeology Program), City of Fort Madison, Iowa Department of Transportation, and HRG to establish appropriate protocols if evidence of human remains is discovered.

If fort-related features or artifacts are uncovered during the machine road surface removal, these will be documented and that area will be subject to archeological excavations to determine the nature and extent of that finding. To this end, excavation units or blocks will be opened. These test units or blocks will be excavated by standard means in either arbitrary or stratigraphic levels. The thickness of the excavation levels will be 10 cm or less, and the sediment will be screened through one-quarter inch mesh. Sediment samples will be taken from constructed and sheet

midden features for flotation and fine-mesh artifact recovery. Similar samples may be taken at other locations at the Principal Investigator's discretion. If evidence for remnants of sheet midden are found (e.g., within the parade grounds) during the trench excavations, additional block excavations will be conducted to recover the data from this area. If an expansive sheet midden is encountered it may be sampled by excavating a linear series of 1 m (3.3 ft) test units in 10 cm levels from which the sediment is screened, then areas of the midden will be sampled by careful shovel-skimming and the piece-plotting of individual artifacts. Presuming areas are located that contain fort-related materials and/or features BCA expects that up to 25 m³ will be excavated in 1 m x 10 cm levels (i.e., 250 test unit levels). These unit levels will be excavated as needed to obtain the maximum amount of data.

If the monitoring does not result in the identification of fort-related materials, no additional archeological investigations will be conducted outside of the planned utility trenches unless the need is indicated by the trench excavations or until the special compaction of subgrade occurs (see later in this Data Recovery Plan). After the monitoring of the removal of the road surface material within the fort footprint, elevation data will be collected using total station mapping equipment. The total station will also map the locations of fort-related features and any isolated historic artifacts (collected and bagged individually with unique provenience numbers) encountered. The north side of Avenue H already contains several utility trenches. In order to aid the planning of future projects, these and other disturbances will be mapped with the total station whether or not fort-related cultural materials are documented.

If during the monitoring, any large pits are identified that have the potential to hold human burials, the protocol for handling possible human remains will be implemented and the area secured. If human remains are encountered at any point during the project (e.g., in midden or other typically non-burial contexts), the general location will be secured and not further disturbed, and relevant persons notified.

Based on the results of the monitoring, an on-site meeting with personnel from the Iowa State Historic Preservation Office, Iowa Department of Transportation, City of Fort Madison, HRG, Office of the State Archaeologist, etc., may be necessary to determine the next stage of the project (e.g., data recovery, no additional investigations, etc.).

The plans for the Avenue H reconstruction in the vicinity of Old Fort Madison and Battlefield (13LE10) also call for the installation of new utility trenches (Figure 3). In the vicinity of the fort, these trenches total 201 m (658 ft) in length and are presumed to have a surface width of 3 m (9.8 ft). The depth of excavation for these trenches will range from approximately 1.8–3 m (6–9.8 ft). Recent geomorphological investigation along this portion of the roadway suggests that the depth of impact from past road construction ranges from about 55–85 cm (1.8–2.8 ft) in this area (Figure 4). A 1 m (3.3 ft) wide sub-trench will be established in the center of the utility trenches and will be excavated by fine shovel-skimming. This skimming will be conducted without screening the sediment except in areas with indications of fort-related artifacts, materials, features, or fort construction disturbance. In those areas, test units or blocks excavated by standard means (including sediment screening through one-quarter inch mesh) will be opened and will expand into the adjoining portions of the utility trench. A minimum of 201 m² (the combined length of the 1 m wide sub-trenches) will be excavated within the utility trench. Except in areas with fort-related

features, the excavations are expected to be relatively shallow. In the eastern portion of the monitoring/data recovery area, the landform under the road-fill is interpreted to be a Kingston terrace and the western portion is on fan/colluvial deposits and in both settings, materials related to the fort should be at or near the landform surface. Excavations in areas with fort materials and features will continue downward until sediments that lack cultural materials are reached. Sediment and other samples will be taken from any encountered features.

After the utility lines have been lain and the trenches closed, the roadway is to undergo a process called special compaction of subgrade. This process entails the disking of the exposed surface to a depth of approximately 15 cm (6 in) then the area is compacted, resulting in a uniform surface. Prior to the special compaction of subgrade, if higher potential areas (those that have previously been interpreted as likely to contain fort structures) have not already demonstrated a lack of cultural materials (if culturally sterile natural soil horizons are not present at the exposed surface), additional excavation blocks may be opened by shovel-skimming. Areas where these blocks may be placed include the interpreted locations of the stockade walls, the southeastern blockhouse, and the enlisted personnel barracks. Because of the numerous existing utility trenches, these excavation blocks would mostly be placed along the southern side of the road centerline (Figure 3). If any cultural features or artifacts are uncovered during this shovel-skimming, controlled archeological excavations will be conducted in the manner previously described. Excavation blocks will also be placed in areas adjoining portions of the trench that contained features or other fort-related material.

Towards the end of fieldwork, a site visit from Memorandum of Agreement signatories and other relevant persons is planned. At that time, the investigation results will be summarized in anticipation of ending the field stage of the project. If the level of data recovery is deemed sufficient, then a brief post-field letter report will be prepared summarizing the fieldwork, results, and recommendations.

Upon completion of the fieldwork, the artifacts, soil samples, and other data will be returned to the BCA laboratory in Cresco for processing using techniques following guidelines approved by the Association of Iowa Archeologists (AIA). After initial washing, the artifacts will be sorted into general classes, followed by cataloging and analysis using widely accepted techniques and descriptive terms. The artifacts will then undergo processing and preparation for long-term curation. The final part of the project is the preparation of a report meeting Secretary of the Interior and AIA (2018) guidelines. Minimally, this narrative will begin with background sections on site location, historic context, environmental setting, excavation methods, site history and previous investigations, followed by detailed artifact and feature summaries and cultural interpretations. If the data obtained during the Avenue H Old Fort Madison and Battlefield (13LE10) project allow, the following research questions will be addressed.

Question 1: McKusick found evidence for intact historic features within the road right-of-way on the north side of Avenue H and environs outside to the north and south as well. How extensive are the adverse effects from road and utility construction on the fort component elsewhere in the right-of-way, especially that part crossed by the roadbed? Are the lower parts of deep features such as foundations, pits, wall trenches, etc., extant and still contain archeologically significant data? Is the fort alignment, measurements, and general footprint on the 1810 map (Figure 2)

correct? McKusick (1980:123–124) suggests the southern end as indicated on the map may be 3–4 m (~12 ft) too far south.

Question 2: McKusick (1980:100–101) reports the fort’s stockade was built of individual abutting posts set into a trench, although circumstances at that time did not allow for following the line of posts for any distance. Conversely, two stockade walls cross Avenue H, collectively with a total length of minimally 20 m (Figure 2). Do McKusick’s observations hold true for these sections or are there variations in construction? Are the walls here also burned? Also, what types of wood were used for construction? Is there evidence for reconstruction or stockade realignment?

Question 3: Based on a map of the fort overlaid on Avenue H, the Enlisted Men’s Barracks straddle the entire width of the road, and McKusick (1980:161, 163) found remains of a fireplace under the sidewalk paralleling the north side but no solid evidence for a barracks foundation. Were the barracks constructed on wood posts sunk into the terrace? Is there evidence for a second fireplace at the south end and/or a cellar for cold storage? McKusick notes that a mess and common rooms were likely present on the ground level. Is there extant artifact/feature evidence for such use? Are exterior areas proximal to the barracks also covered by cobblestones like the Officers’ quarters?

Question 4: The small parade grounds within the fort were east of the barracks and south of the Officers’ quarters. What is the archeological evidence for this identification? Are there rubbish pits here or immediately outside the fort with macrobotanical and faunal remains, artifacts, and other evidence of the daily life of the fort? Does a thin sheet midden exist on the parade grounds?

Question 5: In the southeast quarter of the fort near the eastern wall a guard house is plotted on the 1810 map. Of similar size as the blockhouses in the southwest and southeast corners, are there differences in construction between this guard house and Blockhouse 1 partially uncovered by McKusick’s crew? Is there any artifact evidence for use by soldiers?

Question 6: What is the archeological evidence for repeated skirmishes and military engagements with Native Americans?

Question 7: Is there any evidence for human interments within the Avenue H right-of-way? The most obvious evidence would be oblong pit features within or proximal to the fort location containing, upon excavation, human remains. However, no pit feature excavation will be undertaken until completion of the machine/hand clearing work and consultation with signatories of the Memorandum of Agreement (Iowa State Historic Preservation Office, City of Fort Madison, and Office of the State Archaeologist).

Question 8: It was not uncommon for the fort commander to also have in residence his wife and family (e.g., Captain Horatio Stark brought his wife Hannah and their infant child, Mary, to the fort in summer 1809; Jackson 1958:21). What is the archeological evidence for civilians living at the fort?

REFERENCES CITED

- Artz, Joe Alan, John F. Doershuk, Cynthia L. Peterson, and William E. Whittaker
 2011 *Investigating the Archaeological Context of the Original Fort Madison (13LE10) Battlefield and Black Hawk's Ravine, Lee County, Iowa*. Research Papers 35(2). Office of the State Archaeologist, University of Iowa, Iowa City.
- 2012 Always Been in Peril: Fort Madison, Iowa. *Illinois Antiquity* 47(3):26–27.
- Association of Iowa Archaeologist (AIA)
 2018 Association of Iowa Archaeologists Guidelines. Revised November 12, 2018. Electronic document, <http://aiarchaeologist.org/guidelines/>, accessed March 2019.
- Collins, Angela R., and William E. Whittaker
 2017 Old Fort Madison and Battlefield. National Register of Historic Places Registration Form. Updated listing approved April 18, 2018.
- Doershuk, John F., Joe Alan Artz, Cynthia L. Peterson, and William E. Whittaker
 2012 Defining Battlefield Archaeological Context at Fort Madison, Iowa. *Midcontinental Journal of Archaeology* 37:219–242.
- Hansman, John
 1987 An Archaeological Problem at Old Fort Madison. *Plains Anthropologist* 32:217–231.
- 2009 Garrison Graves at Old Fort Madison. *Newsletter of the Iowa Archeological Society* 59(3/4):8–9.
- Hesse, B. B., IV
 1972 Old Fort Madison. National Register of Historic Places Inventory–Nomination Form. Listed May 7, 1973, Information ID: 73000734.
- Jackson, Donald
 1958 Old Fort Madison. *The Palimpsest* 39(1):1–65.
- McKusick, Marshall
 1980 Fort Madison, Iowa: 1808–1813, edited by Bradley B. Williams. *Research Papers* 5(1). Office of the State Archaeologist, University of Iowa, Iowa City.
- 2009 Fort Madison, 1808–1813. In *Frontier Forts of Iowa: Indians, Traders, and Soldiers, 1682–1862*, edited by William W. Whittaker, pp. 55–74. University of Iowa Press, Iowa City.
- Thompson, Joe B., and Lowell Blikre
 2018 *Geomorphic Evaluation and Literature Review of Avenue H Where It Crosses Old Fort Madison and Battlefield Site (13LE10) Within the City of Fort Madison, Lee County, Iowa*. BCA 2448. Bear Creek Archeology, Inc., Cresco, Iowa.

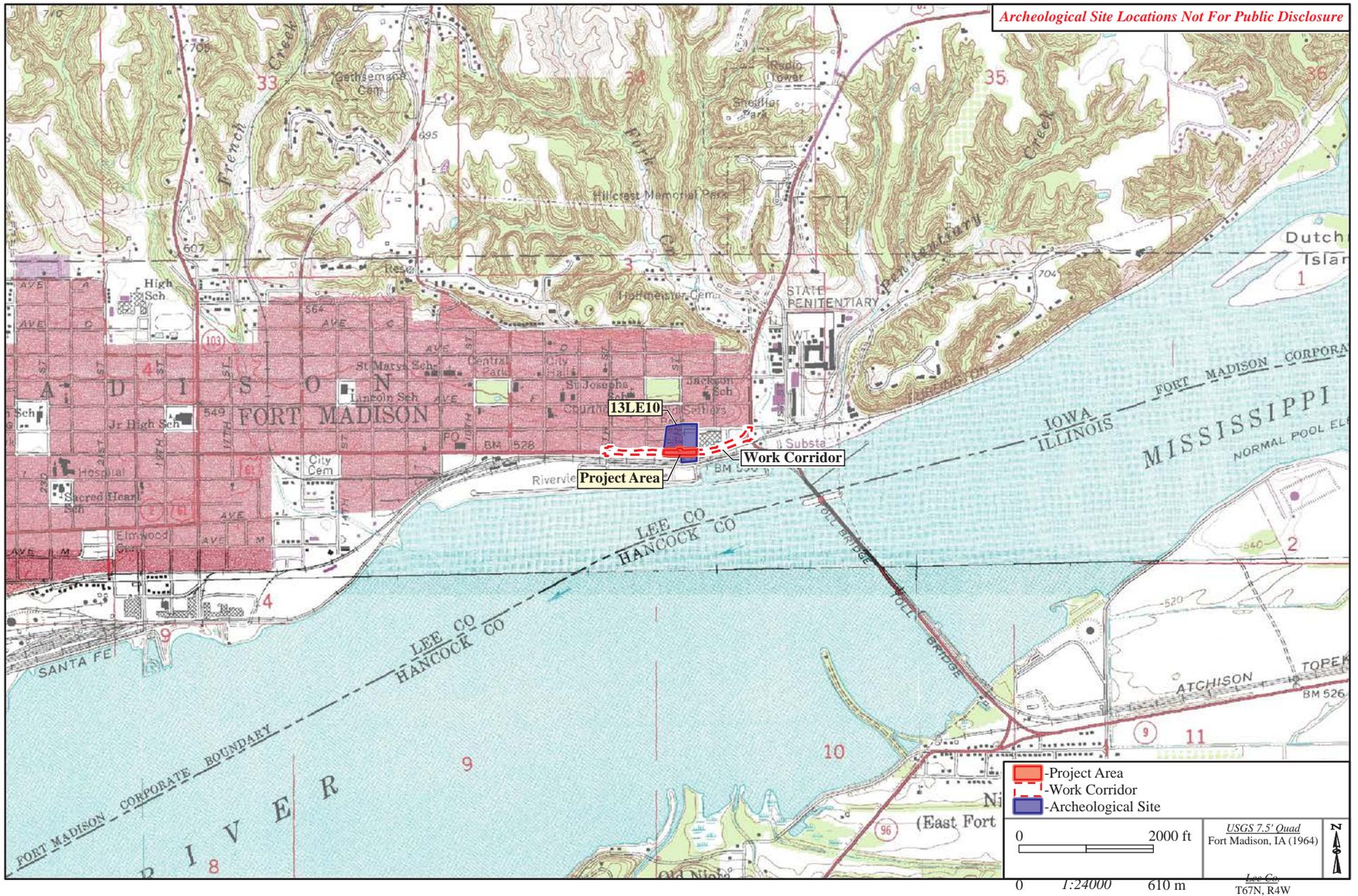


Figure 1. Topographic coverage of the project area.

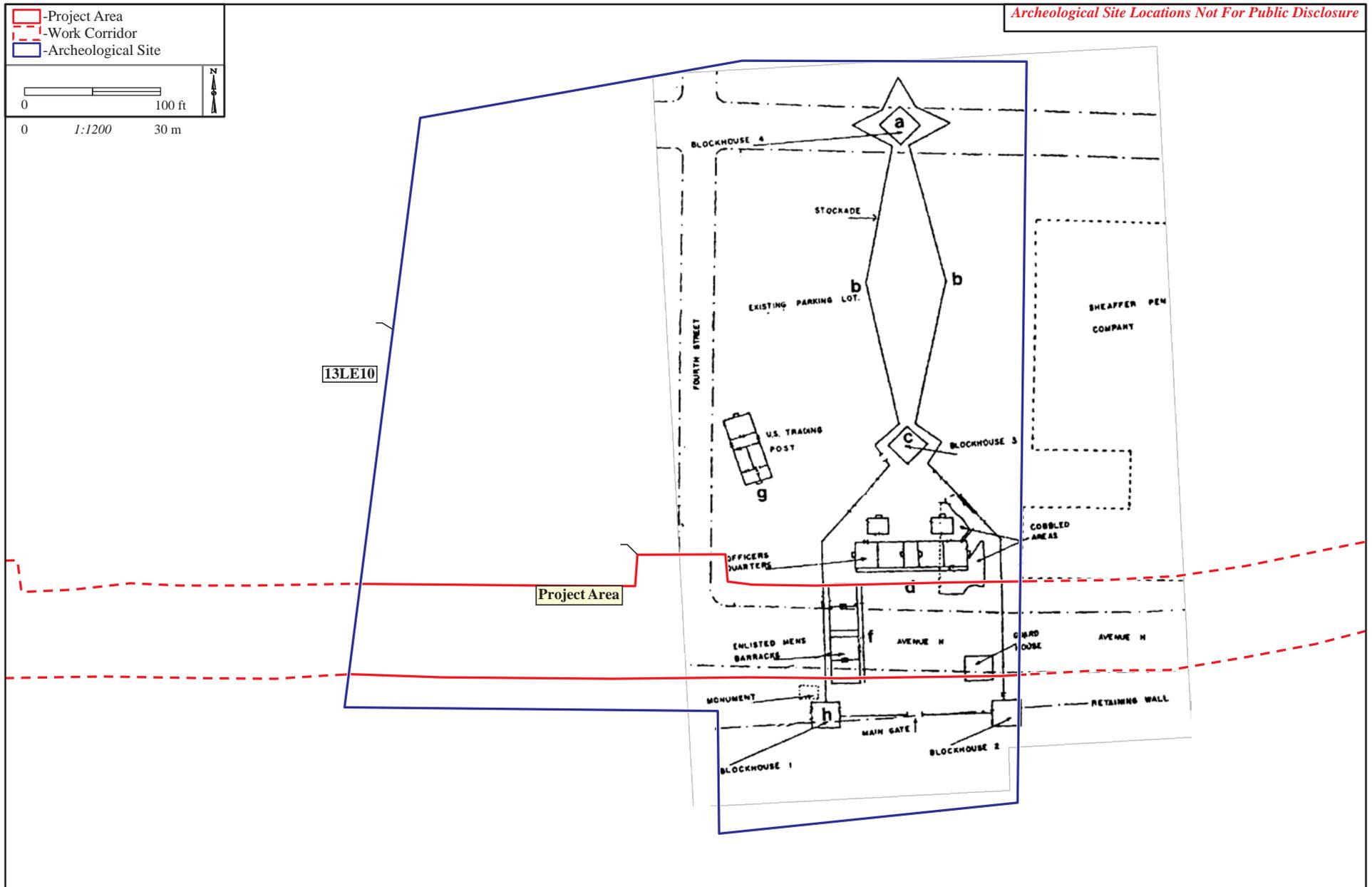


Figure 2. Locations of McKusick's excavation and identified buildings within Old Fort Madison with present project area overlaid.

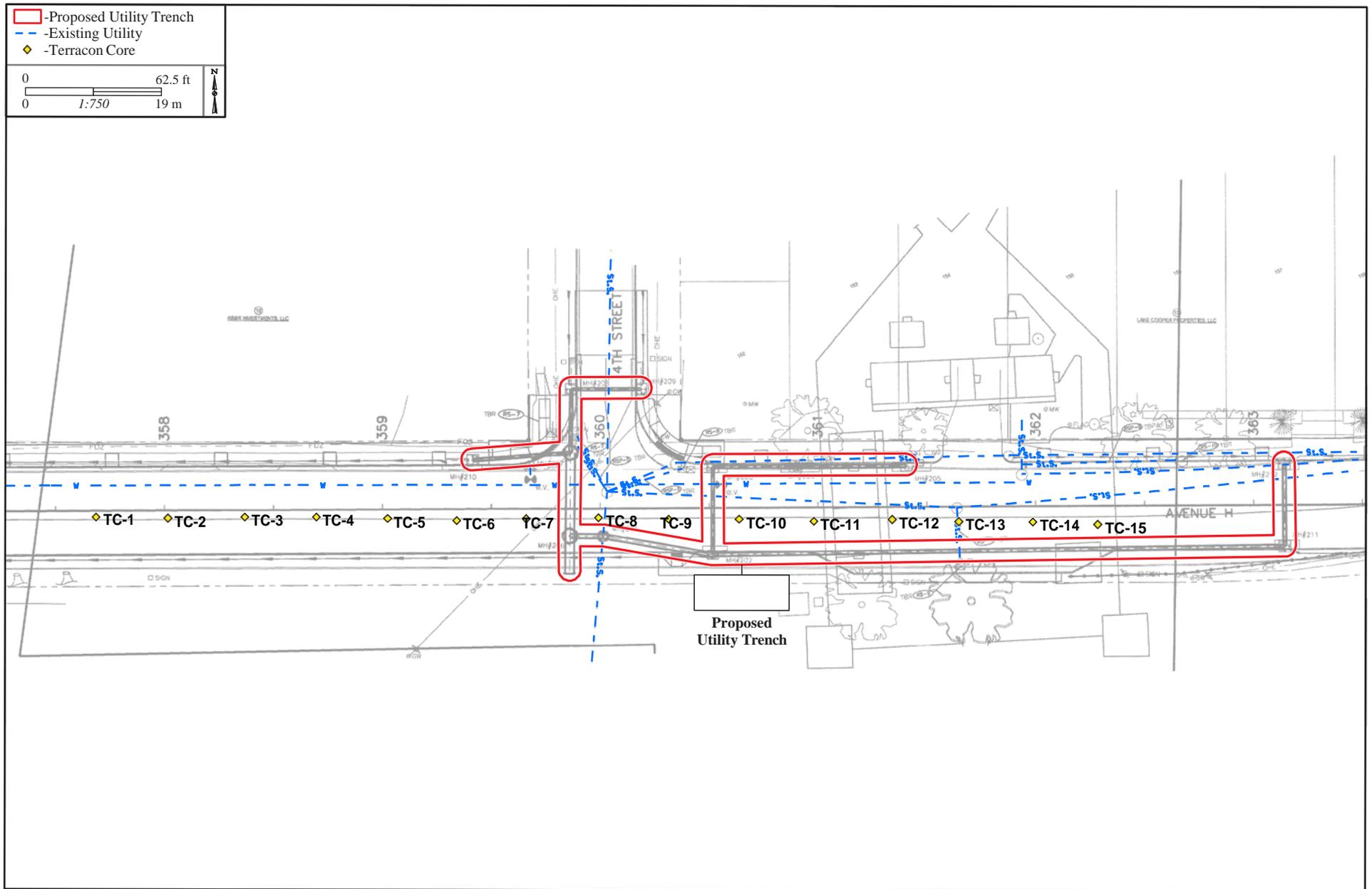
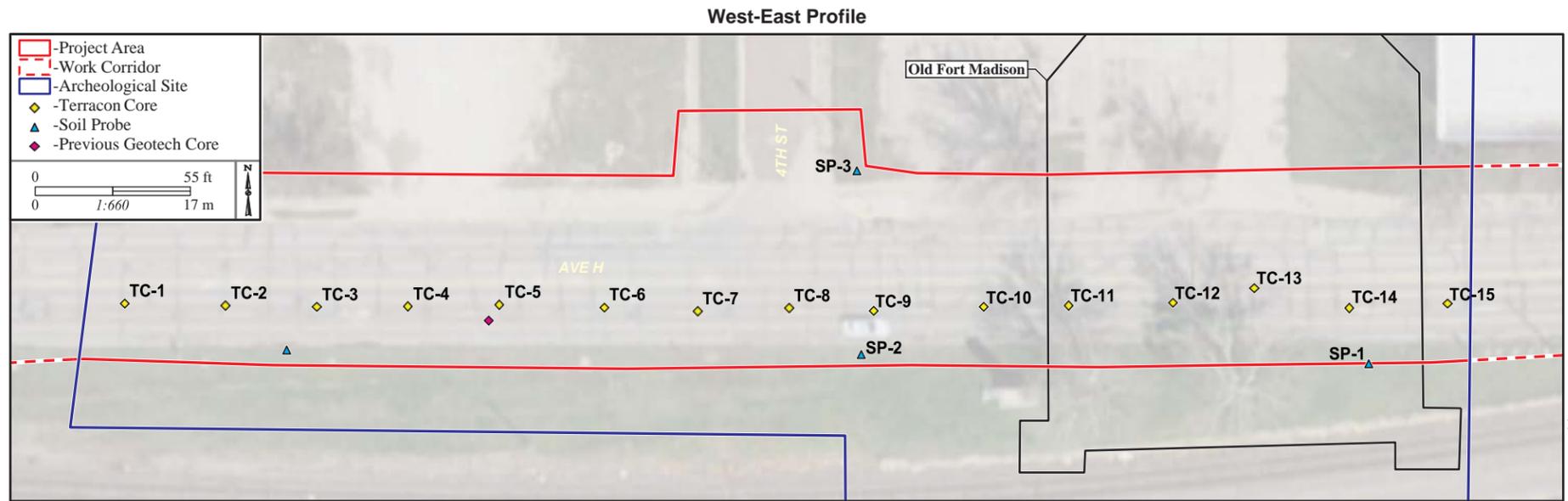
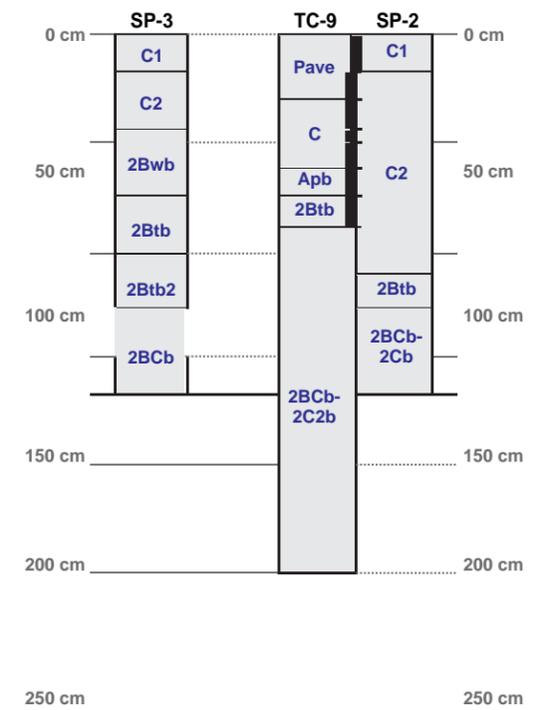
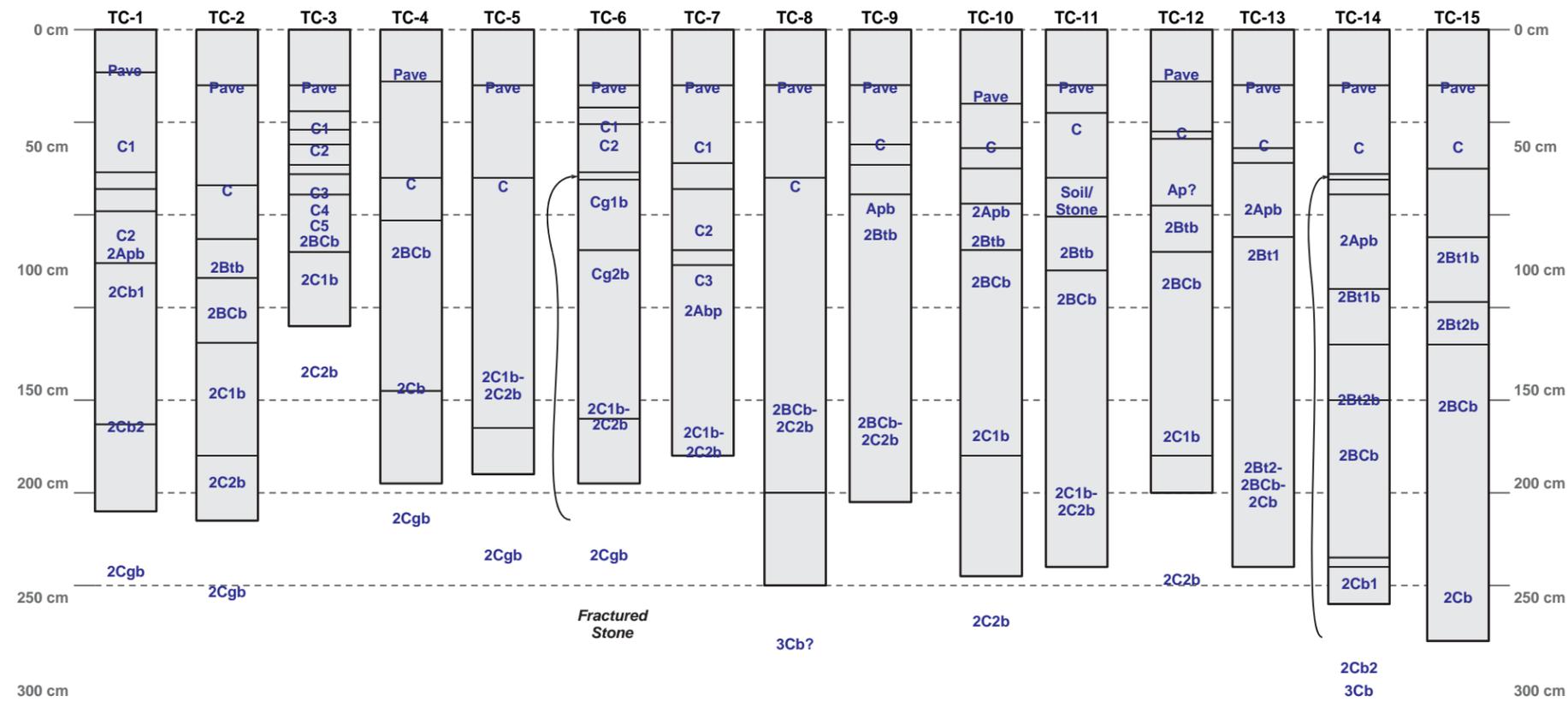
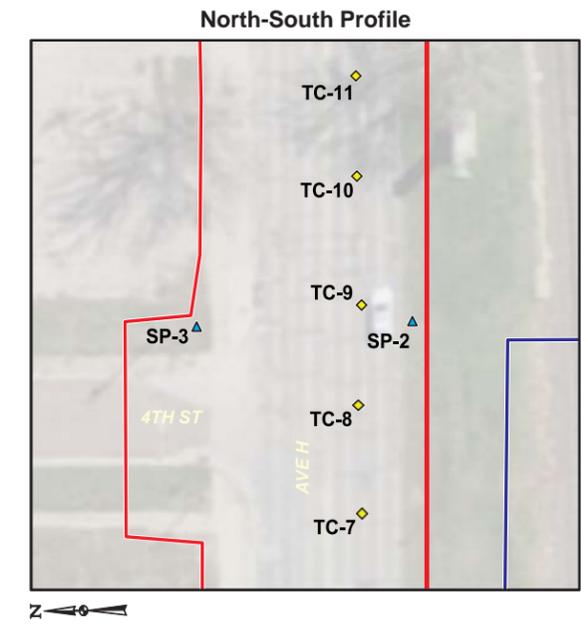


Figure 3. Location of the proposed utility trench in the vicinity of Old Fort Madison.



Archeological Site Locations Not For Public Disclosure



*Burned
Sand*

Figure 4. Diagram of soil profiles west-east on Avenue H and north-south near the 4th Street intersection.