Phase I Archaeological Survey of Proposed Housing Development in Ramsey, Anoka County, Minnesota

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Final Report
October 27, 2020

Phase I Archaeological Survey of Proposed Capstone Homes Housing Development in Ramsey, Anoka County, Minnesota

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Management Summary

Capstone Homes is proposing to build a residential development in the City of Ramsey, Anoka County, Minnesota. The project area, approximately 78.63 acres in size, is located in the E ½ of Section 30 and W ¼ of Section 29 of Township 32N, Range 25W in Archaeological Region 4e: Central Lakes Deciduous East. Historically and recently the majority of the project area was cultivated with a long wooded patch along the southwestern edge. The project area is bordered by Highway 10 approximately 500 feet to the north, the Mississippi River approximately 600 to 700 feet to the south, Bowers Drive approximately 200 feet to the west, and a solar farm on the east. Planned development includes a tree preservation area within the existing stretch of woods, 243 detached residential units, residential streets, and single-acre public park at the center.

Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in October of 2020. NCC's Principal Investigators for this project were Jeremy Nienow, PhD., RPA, who is licensed for Phase I archaeological work in Minnesota (20-042, Appendix A), and Laura Koski, MSc, RPA. Work began with a literature review October 7 followed by fieldwork completed October 9, 14-15, 2020. Fieldwork consisted of surface survey of corn fields and a cabbage and pumpkin patch, and shovel testing of the wooded area. Surface visibility in the agricultural fields ranged between 0 and 80%. Surface survey transects were spaced on a maximum of a five-meter interval. Fifty-two shovel tests were excavated. Shovel tests were typically 35-40 centimeters (cm) wide and at least 80cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. No prehistoric cultural materials were encountered. Recent historic materials (i.e. shotgun shells, whiteware sherds) and modern debris (i.e. plastics, aluminum cans) were encountered, but not collected.

Shovel test profiles documented consistent ancient floodplain soils. No prehistoric cultural material or archaeological features were identified during the field survey. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed, and the project continues as planned. With any project there is the chance of unanticipated discovery. Should archaeological materials surface during any future construction, it is advised a professional archaeologist be consulted. Minnesota Statute 307.08 protects unplatted cemeteries (including burial mounds) and issues guidelines for dealing with unexpected finds. Should human remains be encountered during earth moving activity, all work must stop and local law enforcement must be called.

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1.0 INTRODUCTION

Capstone Homes is proposing to build a residential development in the City of Ramsey, Anoka County, Minnesota. The project area, approximately 78.63 acres in size, is located in the E ½ of Section 30 and W ¼ of Section 29 of Township 32N, Range 25W in Archaeological Region 4e: Central Lakes Deciduous East (Figure 1). Historically and recently the majority of the project area was cultivated with a long wooded patch along the southwestern edge. The project area is bordered by Highway 10 approximately 500 feet to the north, the Mississippi River approximately 600 to 700 feet to the south, Bowers Drive approximately 200 feet to the west, and a solar farm on the east. Planned development includes a tree preservation area within the existing stretch of woods, 243 detached residential units, residential streets, and single-acre public park at the center (Figure 2).

Nienow Cultural Consultants LLC (NCC) was contracted to complete a Phase I Archaeological Survey in October of 2020. NCC's Principal Investigators for this project were Jeremy Nienow, PhD., RPA who is licensed for Phase I archaeological work in Minnesota (20-042, Appendix A), and Laura Koski, MSc, RPA. NCC subcontracted six individuals to assist in completing research, fieldwork, and lab processing for the project: Alexandra Hedquist (Hedquist Archaeological Consulting, LLC), Anastasia Walhovd (Makoons Consulting, LLC), Chris Rico (Rico Cultural Resource Management Services, LLC), Fred Sutherland (Sutherland Relics and Rust LLC), John Strot (John's Archaeological Consulting), and Laura Koski (Zooarchaeo Consulting). The investigation was guided by the Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (48FR44716), the State Historic Preservation Office's (SHPO) Manual for Archaeological Projects in Minnesota (Anfinson 2005), and the State Archaeologist's Manual for Archaeological Projects in Minnesota (Minnesota Office of the State Archaeologist 2011). Research and report preparation were accomplished by professional archaeologists meeting the standards set forth in 35CFR61.

Work began with a literature review October 7 followed by fieldwork completed October 9, 14, and 15, 2020. Fieldwork consisted of surface surveying corn fields, a cabbage, and pumpkin patch, and shovel testing the wooded area. Surface visibility in the agricultural fields ranged between 0 and 80%. Surface survey transects were spaced on four to five-meter intervals. Fifty-two shovel tests were excavated. Shovel tests were typically 35-40 centimeters (cm) wide and at least 80cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. No prehistoric cultural materials were encountered. Recent historic materials (i.e. shotgun shells, whiteware sherds) and modern debris (i.e. plastics, aluminum cans) were encountered, but not collected.

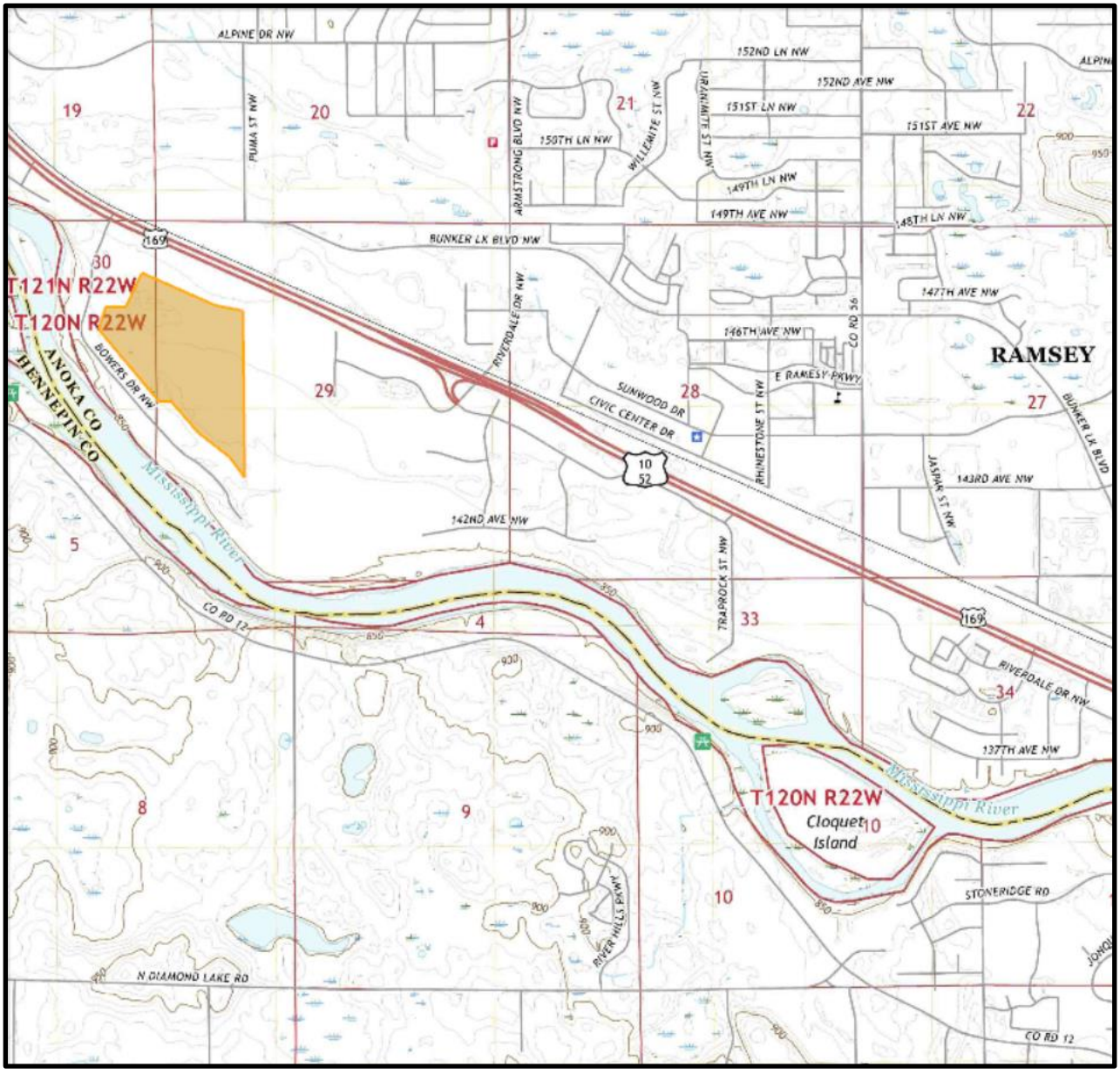

Figure 1: USGS Topographic Map Illustrating Project Area (orange polygon).
(USGS 7.5' Topographic Map, Anoka Quadrangle, 2019, 1:24,000)

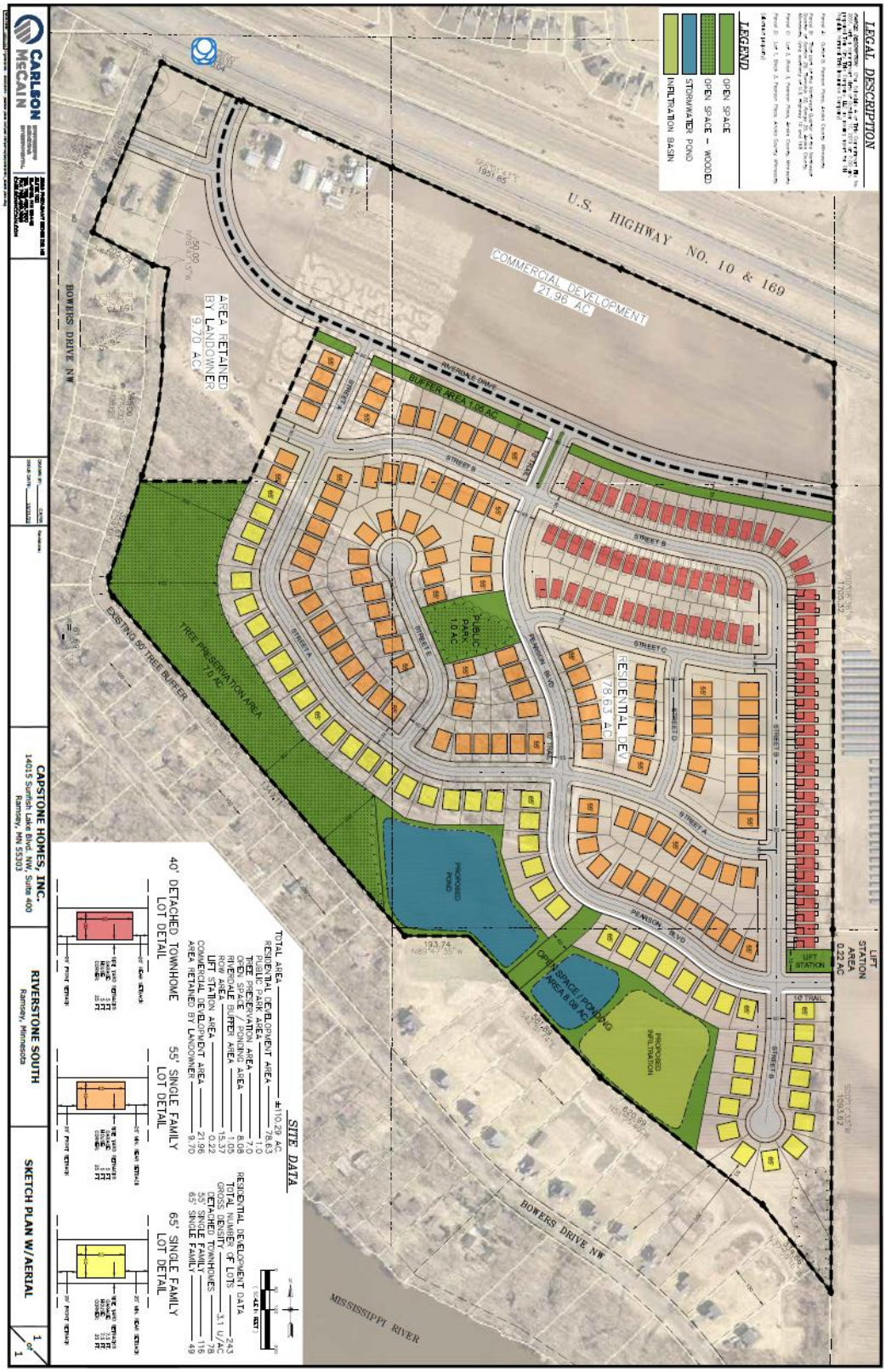

Figure 2: Engineering Sketch Plan of Project Area.
(Provided by Capstone Homes, Inc.)

2.0 RESEARCH DESIGN AND METHODOLOGY

2.1 Literature Review

A literature review was completed on October 7, 2020. Typically, the literature review would be completed by visiting the Office of the State Archaeologist and the State Historic Preservation Office. Unfortunately, both of these offices were closed due to safety precautions surrounding SARS-CoV-2 spread prevention. Instead, previously identified archaeological sites were noted for a two-mile radius surrounding the project area using the online Minnesota Office of the State Archaeologist archaeological sites portal (OSA Portal). In addition, the Township/Range/Sections within the two-mile radius were sent to the State Historic Preservation Office to generate an internal database search. The Township/Range/Section search did not yield any additional sites not included on the OSA Portal. Archaeological survey reports from nearby sites were also requested to determine whether survey had already been completed within the project area. All resulting previously identified sites and requested surveys were reviewed as a part of this project.

2.2 Fieldwork

Fieldwork was completed on October 9, 14, and 15, 2020. Fieldwork included surface survey and shovel testing within the project area (Figure 2). Surface surveyed areas consisted of cultivated corn fields, a cabbage patch, and a pumpkin patch. Ground visibility in all surface-surveyed areas ranged between 0 and 80% (see Appendix B for example surface visibility photographs). These areas were surface surveyed on a four to five-meter interval between cultivated rows. Considering the wooded area contained dense vegetation and fallen leaves preventing surface survey, along with the fact this area lies closest to the Mississippi and is therefore the most likely location within the project area to contain prehistoric cultural materials, the wooded area was tested in three shovel test transects. The first transect was laid in on a 15-meter interval, approximately 15-meters northeast and parallel to the southwestern project boundary. The second transect was laid in 30-meters northeast of and parallel to the first, but considering the negative tests in the first transect, and the clearly documented ancient floodplain soils, shovel tests in this transect were excavated on a 30-meter interval. A third transect was placed on a ridge along the northwestern edge of the wooded area with the intent of targeting what was in the past a high point along the historic Mississippi River's edge. Fifty-two shovel tests were excavated in total. Shovel tests were typically 35-40 centimeters (cm) wide and at least 100cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test.

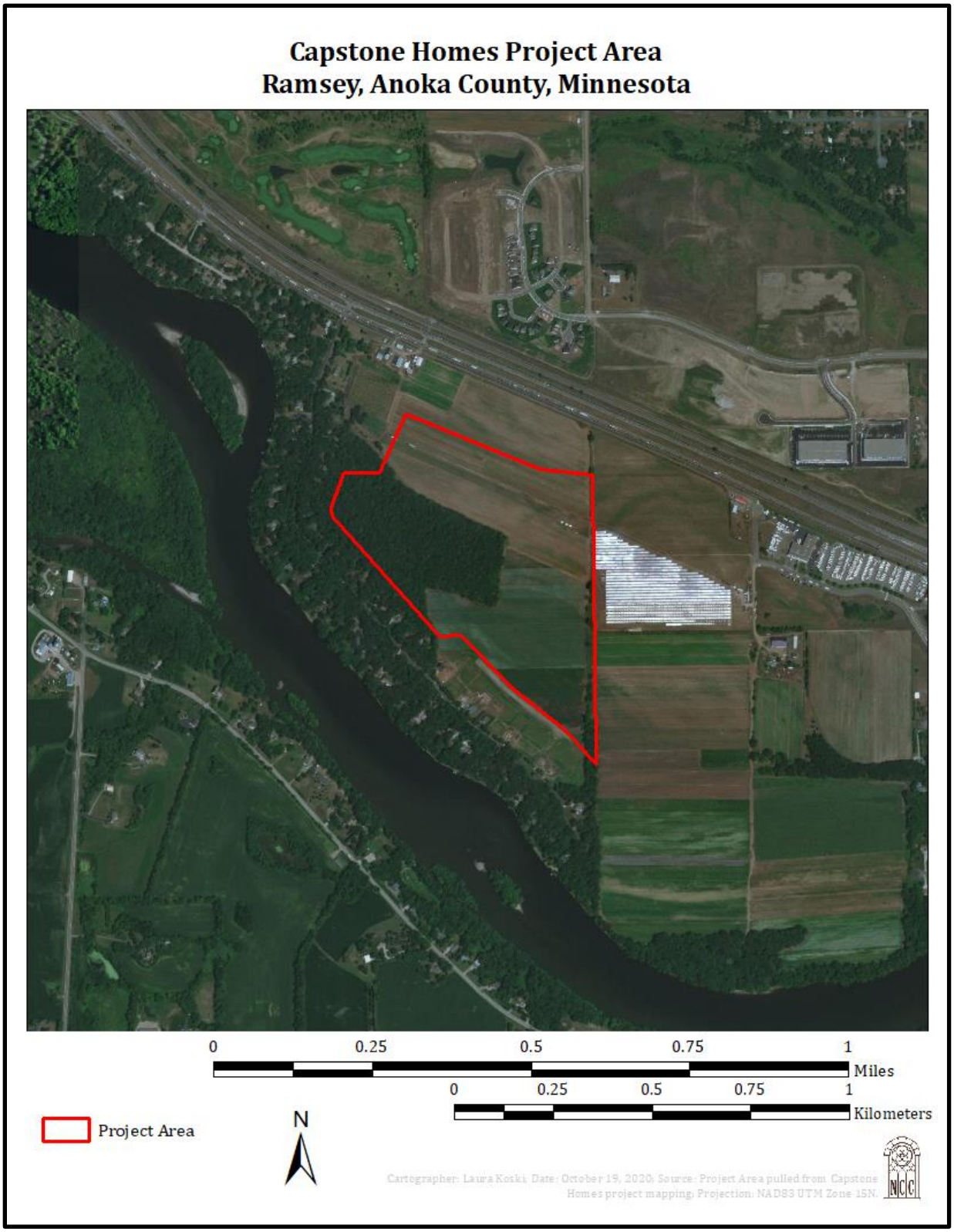

Figure 3: Illustration of Project Area Boundary (red border).
(Basemap provided by 2016 Google Satellite Imagery)

3.0 ENVIRONMENTAL SETTING

3.1 Geological Background and Soils

In his 1990 publication *Archaeological Regions in Minnesota and the Woodland Period,* former State Archaeologist Scott Anfinson divides the state of Minnesota into nine environmental-archaeological regions based on natural resources available within each region. This classification allows archaeologists to research and analyze prehistoric environments in the state, as well as predict where archaeological sites may be located.

The Capstone Homes Development project area falls within the southeastern portion of Anfinson's region 4e: Central Lakes Deciduous East Sub-Region. The region sits within east-central to central Minnesota, spanning Dakota to Becker Counties. Topographically, the region consists of a mixture of moraines, till plains, and outwash plains, and is heavily spotted with lakes, some over 30 meters (m) deep. Major rivers include the Mississippi and Minnesota Rivers flowing along the western boundary of the region, and the St. Croix River along the region's eastern boundary. Streams draining the western part of the region flow in a western direction to the Red River (Anfinson 1990). River formation was the result of a complex glacial history including several episodes of advancing and retreating glacial lobes.

The Central Lakes Deciduous East Sub-Region is located directly west of the Mississippi River, but could arguably incorporate portions of western Wisconsin. The regional topography consists of moraines, glacial till, and outwash plains, as well as a large variety of lakes, streams, and wetlands (Gibbon et al. 2002). Average precipitation ranges from 21 to 32 inches (Grimes 1968). Average high winter temperatures range from 12 to 24 degrees Fahrenheit (F) while average high summer temperatures range from 78 to 82 degrees F. The frost-free season ranges from 140 to 160 days (Gibbon et al. 2002).

Soils in the region reflect a diverse history of glacial and vegetation activity. Soil texture ranges from medium to course, with prairie soils more commonly found in the southern and western portions of the region and forest soils found mostly in the north and east portions (Anfinson 1990). Bedrock outcrops are mainly located along the region's central and eastern edge, and are comprised of mainly granite outcroppings along river banks (Gibbon et al. 2002).

All soil source material was deposited during the Wisconsin stage of the Pleistocene epoch. Two main types of glacial drift were deposited over the county when the Superior Lobe retreated from the area around 13,500 years ago. The Superior Lobe, which flowed into the area from the north, deposited coarse textured material, reddish brown in color, with pebbles of basalt, gabbro, and red sandstone. At a later date, the Grantsburg Sub-lobe, an extension of the Des Moines Lobe, advanced into Sherburne County. This lobe brought in what is commonly called "gray till" or "buff till." During the retreat of the Grantsburg Lobe around 12,500 years ago, the ice stagnated in the northern and eastern parts of the county and melt water left intermixed outwash gravel and sand from both of the previous lobes. Additionally, when the Grantsburg Lobe retreated westward, it uncovered the Mississippi Valley, and melt water from the wasting Des Moines Lobe filled the

valley throughout the county with coarse alluvium, which underlies two broad terraces parallel to the Mississippi River, an example of which is notable in the Capstone Homes project area. The sand in these areas are course in texture near the river and become increasingly finer in texture the further the distance from the river. In various places, it is underlain by strata of calcareous gravel, which was representative of what was found during the current archaeological survey (Grimes 1968).

The project area is comprised of Hubbard loamy sand ranging between 0 to 2 percent and 2 to 12 percent slopes, Dickman sandy loam ranging between 0 to 2 percent and 2 to 6 percent slopes, and Nymore loamy coarse sand on 12 to 25 percent slopes. The Hubbard loamy sand series consists of excessively drained sandy floodplain outwash found on stream terraces and hillslopes. The typical soil profile for the series consists of loamy sand from 0 to 20 centimeters, loamy sand from 20 to 50 centimeters, loamy sand from 50 to 82 centimeters, and sand from 82 to 200 centimeters. The Dickman sandy loam series consists of somewhat excessively drained floodplain outwash found on stream terraces. The typical soil profile for the series consists of sandy loam from 0 to 30 centimeters, sandy loam from 30 to 45 centimeters, and sand from 45 to 152 centimeters. The Nymore loamy coarse sand series consists of excessively drained floodplain outwash found on stream terraces. The typical soil profile for the series consists of loamy coarse sand from 0 to 18 centimeters, loamy sand from 18 to 66 centimeters, and sand from 66 to 152 centimeters (NRCS 2020).

3.2 Regional Flora and Fauna

Vegetation in the area at the time of Euro-American settlement consisted of Big Wood species in both the south and west portions of the region. Most specifically, the trees were deciduous hardwood species, primarily oak, mixed with deciduous-coniferous forest in the northern part of the region (Anfinson 1990) which also contained maple, basswood, and hickory. As Euro-American settlers moved through the area and cleared portions of forest, prairie land became more abundant. White-tailed deer, bison, elk, beaver, bear, prairie chickens, and a variety of fish and waterfowl would have been commonly available resources (Anfinson 1990). Specific to the site area, the majority of the trees on the sand plain consisted of bur oak and northern pin oak, as well as mixed hardwoods which grow in areas of glacial till, specifically in the areas where the Hayden soil series is prominent (Grimes 1968). Large areas of hardwoods invaded areas of native grasses in the outwash plains along the Mississippi River. The Hubbard series discussed above developed in these areas.

4.0 CULTURAL HISTORY

The Minnesota State Historic Preservation Office (SHPO) has developed statewide contexts examining Minnesota's Prehistoric through recent past. These contexts are laid out on the Minnesota Archaeological Site Form (Minnesota Office of the State Archaeologist 2016). Generally, they describe the history of the state and assist in predicting where specific types of sites may occur.

Native American contexts are commonly divided into three major traditions: Paleoindian, Archaic, and Woodland. Late Woodland is further subdivided into Plains Village, Mississippian, and Oneota Traditions. These divisions are based on significant changes in how these communities lived, with a special focus on subsistence strategies. Historic contexts are generally divided into Contact and Post-Contact periods. The Contact period begins with early European exploration and continues through the Post-Contact period including Euro-American settlement and Minnesota statehood. The following is a general summary of these traditions using the Author's general knowledge and various disseminated sources for information including the OSA's website, Elden Johnson's 1988 *The Prehistoric Peoples of Minnesota*, Gibbon and Anfinson's 2008 *Minnesota Archaeology: The First 13,000 Years*, and Gibbon's 2012 *Archaeology of Minnesota: The Prehistory of the Upper Mississippi River Region*.

4.1 Pre-Contact Period

4.1.1 Paleoindian Tradition (11,500 to 7,500 B.C.)

The Paleoindian Tradition in Minnesota is divided into two periods: Early Paleoindian and Late Paleoindian/Early Archaic (Gibbon and Anfinson 2008). Throughout the Paleoindian, Native American communities were small, mobile, and focused on hunting. However, between the early and late periods, the environment and available food resources changed dramatically. The beginning of the Early Paleoindian Tradition is characterized by retreat of glacial ice and the growth of spruce forests. During this time, now extinct megafauna like mastodon, mammoth, and large bison were available for hunting. The Early Paleoindian period is poorly understood in Minnesota because most evidence for Paleoindian lifeways comes from isolated finds of large fluted projectile points (Gibbon and Anfinson 2008). Based on more plentiful sites in the southeastern and southwestern portions of the United States, it is generally assumed Native American populations were small, consisting of highly-mobile hunters and foragers who followed large game throughout the landscape (Gibbon and Anfinson 2008).

By the Late Paleoindian period, modern vegetation zones had established themselves in Minnesota. Modern animal species like white tail deer, grouse, and fish were available for Native American communities to hunt and fish. Lithic tool evidence from Late Paleoindian sites in Minnesota take the form of stemmed rather than fluted points and a wider range of tool types including groundstone tools (Gibbon and Anfinson 2008). Again, lifeways during this time are poorly understood, but based on three well-documented sites found in Minnesota (Cedar Creek-21AK58, Bradbury Brook-21ML42, and Browns Valley-21TR5), communities are still small, highly-mobile and focused on hunting larger animals and foraging for wild plants. However, stone toolkits did diversify and communities began exploiting smaller territories. It is also likely populations started to increase (Gibbon and Anfinson 2008).

4.1.2 Archaic Tradition (7,500 to 800 B.C.)

The Archaic Tradition continues the trend of resource diversification started in the Late Paleoindian period. Native American communities developed broader toolkits, used a wider array of foods, and became less mobile over the course of the Archaic. Additionally, by the end of the Archaic, communities were using communal burial sites. Stemmed and notched points, groundstone tools, particularly those for woodworking, and cold-hammered copper tools are hallmarks of the Archaic Tradition in the archaeological record (Anfinson 1997; Gibbon and Anfinson 2008). By the end of this period the climate shifted to a cooler, wetter pattern up until the strong, human-driven, warmer climates of the modern era. Resource gathering technologies during the Archaic included the aforementioned hunting, as well as trapping, fishing, foraging, woodworking and plant processing. Many of the larger, documented sites in the central portion of the state likely began during the end of this period.

4.1.3 Woodland Tradition (800 B.C. to European Contact)

In the Midwest region, archaeologists tend to divide the Woodland Tradition into three periods: Early, Middle, and Late. However, Anfinson (1987) and Gibbon (2012) suggest in Minnesota it is more appropriate to divide the era into Initial and Terminal Woodland periods. This view is not as widespread as research would at first suggest, with work including Arzigian's *Statewide Multiple Property Documentation Form for the Woodland Tradition* (2008), and Buhta et. al. *On the Periphery?: Archaeological Investigations of the Woodland Tradition in West- Central Minnesota* (2014), retaining the more traditional use of Early, Middle, and Late designations. Beginning approximately 2,800 years ago, peoples in the region experienced increases in population with the advent of first horticultural and then agricultural subsistence strategies to augment already extant systems of hunting, gathering, etc. As populations increased, settlements near favorable transportation and resource corridors shifted from seasonal to year-round occupations as they made forays to collect necessary resources (Johnson 1988; Anfinson 1987:222).

The period also witnessed the technical transition from spear/atlatl to bow and arrow weaponry useful for both hunting and warfare. This change in technology lead to the use of smaller projectile points or arrow heads. Similarly, the period also saw the invention of ceramic vessels and it is these vessels and their change over time, from thick walled, grit tempered, conoidal vessels, to thinner walled, shell tempered, globular vessels, which has greatly assisted the archaeological community in further refining their understanding of group identity, cohesion, and integration throughout the region. Indeed, there are more than ten major recognized ceramic complexes for the state with many temporal overlaps, often based more on location than visual representation. A final example representing not only identity and permanence on the landscape, but also religious practices, was the use of earthen burial mounds. Although community size was likely similar between the Early Woodland and Late Archaic periods, by the Late Woodland period, populations were certainly on the rise.

4.2 Contact/Post-Contact Period (1630 A.D. to Present)

This period generally refers to the span of time extending from the first European explorations until intensive Euro-American settlement of the region. Minnesota's historic period began in 1673 when French explorers Marquette and Joliet discovered the upper portion of the Mississippi River. Ten years later, Catholic Missionary Father Louis Hennepin told his story of exploring Minnesota and being held captive by Dakota Indians in the first book written about Minnesota, *Description de la Louisiane* (Hennepin 1683).

The territory containing modern-day Minnesota was claimed at various periods of time by Spain, France, Great Britain, and the United States. Lieutenant Zebulon Montgomery Pike led the first United States expedition through the area in 1805, which would ultimately become Minnesota in 1858. Fort St. Anthony (later Ft. Snelling) was completed between 1819 and 1824, and in 1836 the Wisconsin Territory, including a portion of Minnesota, was formed. Just one year later, on September 29th, 1837, during treaty negotiations in Washington, D.C., Dakota leaders ceded their lands between the Mississippi and St. Croix Rivers.

The fur trade drove much of European exploration and settlement into Minnesota prior to territorial frontier settlement in the mid-1800s. While the fur trade impacted Native American communities throughout all of Minnesota, the heaviest impacts came with later Euro-American settlement. Intensive settlement and agriculture dramatically transformed the landscape, displacing large numbers of Native Americans and their communities. In 1862 tensions between white settlers and Native Americans resulted in the Dakota War. Ultimately, this war left 462 whites and "an unknown but substantial number" of Native Americans dead (Anderson and Woolworth 1988). The conflict concluded with the largest mass execution in United States history with the hanging of 38 Dakota on December 26, 1862 at Mankato and the deportation of remaining tribal members to Santee, Nebraska.

Native American archaeological site types associated with this period are generally consistent with those of earlier periods, but European and Euro-American traders, missionaries, settlers, and industries affected the locations of these sites. This period also includes Euro-American immigrant settlement patterns, subsistence activities, and economic strategies. Sites associated with Euro-American immigrants appear in the mid-nineteenth century. Associated archaeological and historic site types categorized in the Contact/Post-Contact period include standing structures as well as archaeological sites.

5.0 LITERATURE REVIEW

Fourteen previously identified archaeological sites and four alpha sites are located within two miles of the project area (Table 1). Alpha sites are versions of archaeological sites which have been reported as *potential* sites based on mentions in literature, historic mapping (i.e. the 1874 Andreas Atlas), or by individuals reporting casually finding cultural materials; these sites have yet to be field verified through systematic archaeological research and survey.

Table 1. Previously Identified Archaeological Sites Within Two Miles

Site Number	Site Name	Site Description	Cultural Affiliation	Miles from Project Area	TRS
21AN0044	Winnebago Enclosure	Enclosure and Earthworks	Historic: Native American	0.1 Miles	T32N, R25W, S30 NW ¼, NE ¼, NE ¼
21HE0090	Dayton Mounds	Six Burial Mounds	Pre-Contact: Woodland	0.73 Miles	T121N, R22W, S31 SE ¼, S ½ And SW ¼, S ½
21HE0326	Dayton A	Habitation, Lithic Workshop	Pre-Contact	1 Mile	T120N, R22W, S9 NE ¼, NW ¼, NE ¼
21AN0136	No Name	Lithic Scatter	Pre-Contact	1 Mile	T32N, R25W, S19 SW ¼, NW ¼, NE ¼
21AN0135	No Name	Lithic Scatter	Pre-Contact	1.23 Miles	T32N, R25W, S18 SW ¼, SW ¼, SE ¼
21HE0327	Dayton B	Single Artifact	Pre-Contact	1.24 Miles	T120N, R22W, S29 SE ¼, NE ¼, SW ¼
21HE0189	Cloquet Island Scenic Overlook	Artifact Scatter	Pre-Contact, Contact, Post-Contact	1.33 Miles	T120N, R22W, S10 NW ¼, W ½
21WR0043	Crow River Scenic Overlook	Habitation	Pre-Contact	1.47 Miles	T121N, R23W, S36 SW ¼, SE ¼, NE ¼
21HE0335	No Name	Habitation	Pre-Contact: Woodland	1.54 Miles	T120N, R22W, S10 NW ¼, SW ¼, NW ¼
21HE0328	Dayton D	Habitation	Lithic Workshop	1.6 Miles	T120N, R22W, S9 NE ¼, SE ¼, SE ¼
21AN0184	No Name	Habitation	Pre-Contact: Habitation	1.7 Miles	T32N, R25W, S33 NW ¼, SE ¼, NE ¼
21WR0027	No Name	Single Burial Mound	Pre-Contact: Woodland	1.98 Miles	T120N, R23W, S1 SE ¼, SE ¼, NW ¼
21WR0125	No Name	Artifact Scatter	Pre-Contact and Post-Contact: Euro-American	1.99 Miles	T120N, R23W, S1 NW ¼, SE ¼, NW ¼
21WR0130	Dayton Quarry Burial	Human Remains	Presumably Pre-Contact	1.99 Miles	T120N, R23W, S1 NE ¼, NW ¼, SE ¼
21ANu	Itasca Village	Ghost Town	Historic: Euro-American	0.63 Miles	T32N, R25W, S19 SE ¼, NE ¼, SW ¼
21WRbp	Dayton city	Historic Documentation	Historic: Euro-American	1.19 Miles	T121N, R23W, S36
21WRbo	Waterville	Ghost Town	Historic: Euro-American	1.19 Miles	T121N, R23W, S36
21WRo	Lahn	Artifact Scatter	Pre-Contact	1.2 Miles	T120N, R23W, S12

No previously identified archaeological sites are located within the project area. Sites located within two miles comprise a mixture of pre-contact and historic activities including pre-contact lithic and artifact scatters, habitations, and burial mounds; as well as historic ghost towns and an earthwork enclosure. Of the pre-contact sites, only a few could be attributed to a cultural tradition,

all of them being of the Woodland Tradition, due to either diagnostic artifacts or archaeological features (i.e. burial mounds).

The relatively high volume of pre-contact sites within two miles of the project area, as well as the project's proximity to the Mississippi River, indicate the project area exhibits reasonable potential to contain pre-contact cultural material. LiDAR data (provided by MNDNR) was examined in an attempt to identify any visible above-ground features with a potentially archaeological origin. These features were not identified, but viewing the LiDAR hillshade revealed the project area had been submerged in the Mississippi River floodplain in the past. The old river cut is distinct to the point at least two major previous river edges can be identified in the project area hillshade imagery, accompanied by clear sandbar deposits between the current river path and the previous flooded edge (Figure 3).

6.0 RESULTS

Fieldwork was completed on October 9, 14, and 15, 2020. This began with surface survey of the cornfields, cabbage patch, and pumpkin patch on a four to five-meter interval. Surface visibility within all surface-surveyed areas varied between 0 and 80% (see Appendix B for example surface visibility photographs). No cultural materials or archaeological features were identified during the surface survey.

Shovel testing was completed along three separate transects within the wooded portion of the project area. The first transect was located 15-meters northeast and parallel to the southwestern edge of the project area (the closest edge to the Mississippi River), and consisted of 25 shovel tests excavated at 15-meter intervals. All shovel tests were negative for cultural materials. Due to the non-cultural nature of the first transect, the second transect, placed 30-meters northeast and parallel to the first, contained 11 shovel tests excavated on a 30-meter interval. This transect was also negative for cultural material. Acknowledging this tested portion of the wooded area landed at times in the past floodplain, a third transect was placed on the highest ridge at the northeastern edge of the wooded area in an attempt to capture where the cultural activity may have been focused while this area was previously flooded (see the middle flooded river edge noted in the LiDAR Hillshade imagery in Figure 3). This transect consisted of sixteen shovel tests excavated on a 15-meter interval and was also negative for cultural material. See Figure 4 for an illustration of shovel tested and surface surveyed locations.

All shovel tests were excavated to at least 80 centimeters below surface (cmbs), well into subsoils. Soil profiles were notably consistent across the shovel tested areas with the average profile containing 10YR 3/2 silty sandy loam 0 to approximately 20-30cmbs, followed by 10YR 3/3 to 10YR 3/6 sand from 20-30cmbs through shovel test termination at 80cmbs. Soils typically became more compact beginning around 50cmbs continuing through 80cmbs. Recorded soils exhibited no signs of human-related disturbance, and reflect the sandy soils deposition expected of the ancient floodplain terrace on which this portion of the project area is located. Considering the depth

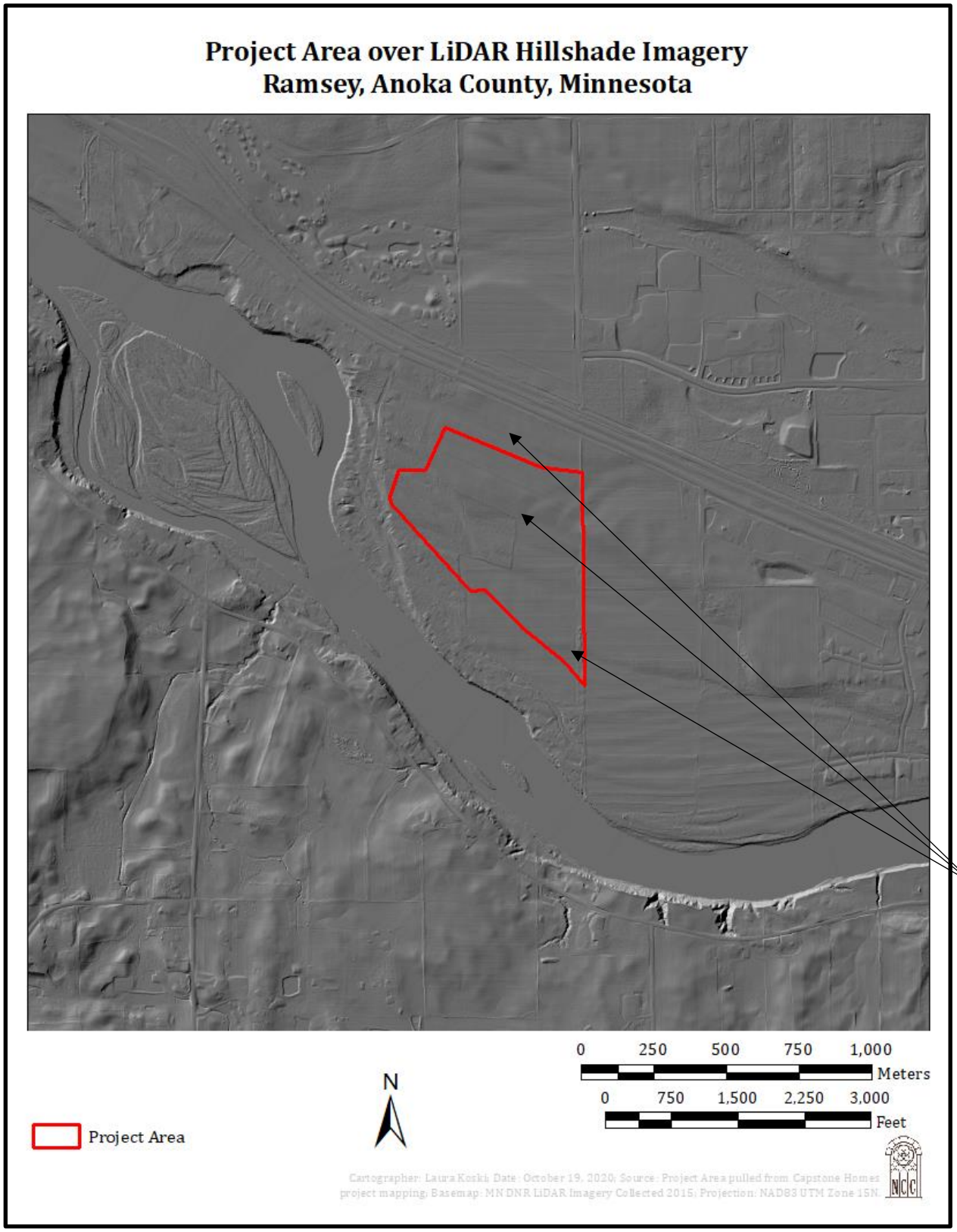

Figure 4: Map of Project Area over LiDAR Hillshade Imagery.

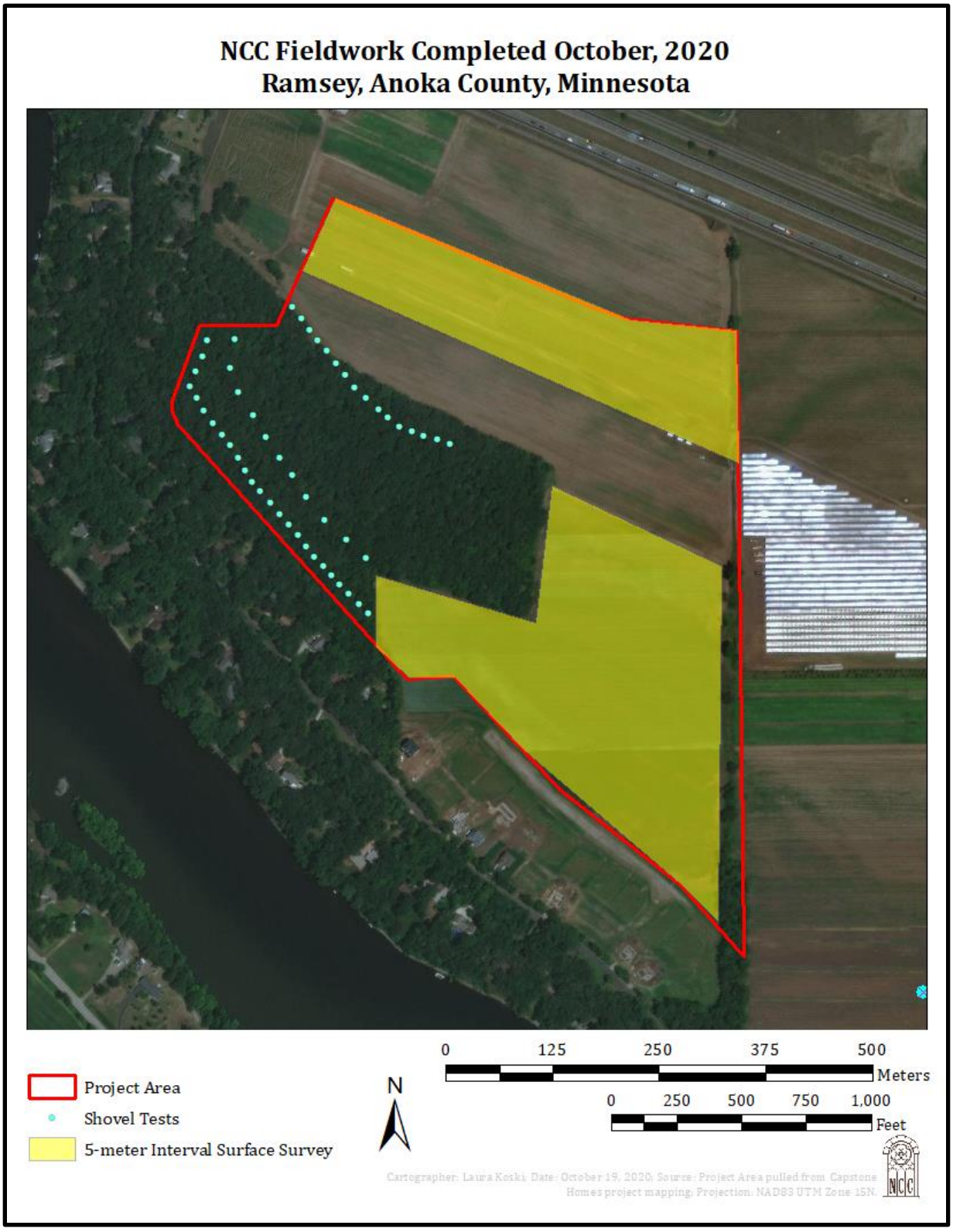

Figure 5: Map of surface surveyed areas and shovel test locations within greater project area. (Basemap provided by 2016 Google Satellite Imagery)

and compaction of these floodplain soils, it is likely this area was flooded consistently enough in the past it was not an attractive location for settlements or camps.

7.0 CONCLUSION AND RECOMMENDATIONS

Capstone Homes is proposing to build a residential development in the City of Ramsey, Anoka County, Minnesota. The project area, approximately 78.63 acres in size, is located in the E ½ of Section 30 and W ¼ of Section 29 of Township 32N, Range 25W in Archaeological Region 4e: Central Lakes Deciduous East. Historically and recently the majority of the project area was cultivated with a long wooded patch along the southwestern edge. The project area is bordered by Highway 10 approximately 500 feet to the north, the Mississippi River approximately 600 to 700 feet to the south, Bowers Drive approximately 200 feet to the west, and a solar farm on the east. Planned development includes a tree preservation area within the existing stretch of woods, 243 detached residential units, residential streets, and single-acre public park at the center.

Work began with a literature review October 7 followed by fieldwork completed October 9, 14, and 15, 2020. Fieldwork consisted of surface surveying corn fields, a cabbage, and pumpkin patch, and shovel testing the wooded area. Surface visibility in the agricultural fields ranged between 0 and 80%. Surface survey transects were spaced on a four to five-meter interval. Fifty-two shovel tests were excavated. Shovel tests were typically 35-40 centimeters (cm) wide and at least 80cm deep. All soils were screened through ¼" mesh screen, detailed profile notes completed, photographs taken, and GPS points collected for each shovel test. No prehistoric cultural materials were encountered. Recent historic materials (i.e. shotgun shells, whiteware sherds) and modern debris (i.e. plastics, aluminum cans) were encountered, but not collected.

Shovel test profiles documented consistent ancient floodplain soils. No prehistoric cultural material or archaeological features were identified during the field survey. Based on these results, Nienow Cultural Consultants recommends no further archaeological work be completed, and the project continues as planned. With any project there is the chance of unanticipated discovery. Should archaeological materials surface during any future construction, it is advised a professional archaeologist be consulted. Minnesota Statute 307.08 protects unplatted cemeteries (including burial mounds) and issues guidelines for dealing with unexpected finds. Should human remains be encountered during earth moving activity, all work must stop and local law enforcement must be called.

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APPENDIX A:

ARCHAEOLOGICAL LICENSE

APPLICATION FOR MINNESOTA ANNUAL ARCHAEOLOGICAL SURVEY LICENSE

This license only applies to reconnaissance (Phase I) surveys conducted under Minnesota Statutes 138.31-.42 during calendar year 2020. Separate licenses must be obtained for monitoring, evaluations/ Phase II and major investigation/Phase III work, and burial site work under Minnesota Statute. This license must be renewed annually. Only the individual indicated below is licensed as principal investigator. The licensed individual is required to comply with all the conditions attached to this license.

Name: Jeremy Loren Nienow

Institution/Agency/Company Affiliation: Nienow Cultural Consultants LLC

Title/Position: Owner / Principal

Address: 200 E. Plato Blvd. St. Paul, MN 55107

Work Phone: 651-295-3744 E-Mail: Jeremy.Nienow@gmail.com

Name of Advanced Degree Institution: U of Minnesota Year: 1997

Department Name: Anthropology Degree: ☐ MA/MS ☑ PhD

Type of Land: (check all that may apply)

☑ State Owned ☑ County Owned ☑ Township/City Owned

☑ Other non-federal public List:

Purpose: (check all that may apply)

☑ CRM ☑ Academic Research ☐ Institutional Field School

Required Documentation:

☑ 1) Curriculum Vita

☑ 2) Documentation of Appropriate Experience

Most Recent License Year 2019 Type I and II *(e.g. Annual, evaluation, mitigation)*

MHS Curation #: 896 Other Approved Facility: RCHS

Signed (applicant): Date: 3/4/20

Submit one copy of this form and attachments to:
Office of the State Archaeologist, 328 West Kellogg Blvd, St. Paul, MN 55102
651-201-2263 651.201.2264 email: mn.osa@state.mn.us

Minnesota Historical Society Approval: Date: 3-9-20

State Archaeologist Approval: Date: 3/5/20

License Number: 20-042

02/28/2019

APPENDIX B:

FIELDWORK PHOTOGRAPHS

Image 1: Of Typical Surface Visibility within Cabbage Patch.

Image 2: Of Field Crew Surveying Cabbage Patch (facing NE).

Image 3: Of Typical Surface Visibility within Corn Fields.

Image 4: Of Field Crew Surveying Pumpkin Patch (Facing SW).
Note Surface Visibility.