Volume 2020 Article 145

2020

Intensive Archeological Survey Of GISD Proposed Middle School City Of Georgetown, Williamson County, Texas

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Intensive Archeological Survey Of GISD Proposed Middle School City Of Georgetown, Williamson County, Texas

Cultural Resources Survey

INTENSIVE ARCHEOLOGICAL SURVEY OF GISD PROPOSED MIDDLE SCHOOL CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS

January 9, 2020

Final Report – Public Copy

Terracon Project No. 96197746A

Antiquities Permit No. 9106

Caitlin Gulihur, MA, RPA, Principal Investigator

Prepared for:

Georgetown Independent School District
Georgetown, Texas

Prepared by:

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ABSTRACT

Georgetown Independent School District (GISD) has proposed the Proposed Middle School project where school facilities will be constructed in western Georgetown, Williamson County, Texas. GISD retained Terracon Consultants, Inc. to conduct a systematic, intensive pedestrian survey of the approximately 31.4-acre project area. Because the GISD, a political subdivision of the State of Texas, sponsored the project, the proposed undertaking is subject to compliance with the Antiquities Code of Texas and oversight from the Texas Historical Commission (THC). In addition, the survey meets the standards for compliance under Section 106 of the National Historic Preservation Act of 1966, as amended, should federal funding or permitting be required for the project. The cultural resources survey was carried out under Texas Antiquities Permit Number 9106, issued to Caitlin Gulihur, MA, RPA, Principal Investigator. Fieldwork was carried out by Caitlin Gulihur with assistance from Archeological Technician Ruben Castillo Jr. Records from the project will be curated at the Center for Archaeological Studies at Texas State University.

The approximate 31.4-acre parcel was considered the Area of Potential Effect (APE). Survey of the APE consisted of systematic pedestrian coverage, including discretionary shovel tests. The work was carried out on October 9, 2019. Sixteen shovel tests were excavated in areas that had less than 30 percent ground visibility or placed in areas previously undisturbed. Cultural materials were not observed during the excavation of shovel tests. One prehistoric-age site, 41WM1408, was recorded during the course of the survey. Site 41WM1408 consists of a low-density lithic procurement area. Site 41WM1408 is recommended as not eligible for listing on the National Register of Historic Places (NRHP) or for designation as a State Antiquities Landmark (SAL).

Given the absence of eligible historic properties within the APE, it is Terracon's recommendation that the proposed project be allowed to proceed as currently designed. In the unlikely event that human remains or cultural features are discovered during construction, construction should cease in the vicinity of the remains and Terracon, the Texas Historical Commission's Archeology Division, or other proper authorities should be contacted.

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January 9, 2020

1.0 INTRODUCTION

This report presents the findings from an intensive pedestrian survey of approximate 31.4-acre parcel on which Georgetown Independent School District (GISD) has proposed constructing school facilities in western Georgetown, Williamson County, Texas (Appendix A, Exhibits 1 and 2). The 31.4-acre survey was performed on behalf of GISD, a political subdivision of the State of Texas. Therefore, the project is under the purview of the Texas Historical Commission (THC) in compliance with the Antiquities Code of Texas. In addition, the survey meets the standards for compliance under Section 106 of the National Historic Preservation Act of 1966, as amended, should federal funding or permitting be required for the project. Work was performed under Texas Antiquities Permit Number 9106, issued to Caitlin Gulihur, MA, RPA Principal Investigator, and in adherence to Title 13, Chapter 26 of the Texas Administrative Code.

Abiding by standards set forth by the Council of Texas Archeologists (CTA), this report includes descriptions of the project area, environmental setting, cultural and historical contexts, methods, results, and recommendations. The report was authored by Caitlin Gulihur, Principal Investigator, and Ann M. Scott, Environmental Planning Group Manager.

2.0 AREA OF POTENTIAL EFFECT

The project area, which is the same as the area of potential effect (APE), is an approximate 31.4-acre parcel. The project area is located west of the intersection of DB Wood Road and Mason Ranch Drive, in western Georgetown, Williamson County, Texas (see Appendix A, Exhibits 1 and 2). The proposed project will consist of the construction of a middle school and associated facilities. The exact plans for the middle school have not been finalized, but the school building is anticipated to be two stories tall. Parking lots and athletic facilities will also be constructed on the parcel. Athletic facilities are expected to include a track and football field, tennis courts, bleachers, and lighting. The vertical depths of impact for the project is currently unknown, but the maximum depths of impacts will likely be 20 feet.

3.0 ENVIRONMENTAL SETTING

Environments are composed of various interconnected elements such as underlying bedrock geology, soil, flora, fauna, and climate. It is important to consider environmental conditions of the past and present when assessing cultural resources.

In general terms, the project area is located near the transition between three large-scale biotic provinces or biomes, the Balcones Canyonland, the Limestone Cut Plains, and the Northern Blackland Prairie (Griffith et al. 2007). Each of these biomes is characterized by a distinct set of physical and biological properties, and the transitional zone is known to have endemic plant and animal communities as well (Blair 1950). These transitional zones are known as ecotones, and they typically support relatively increased biological richness and diversity (Crumley 1994). Locally, the project area is in the Balcones Canyonland ecoregion. Limestone Cut Plains begins north of the project area; Northern Blacklands Prairie begins east of the project area. More specifically, the APE is nestled in the gently sloping plain south of the Middle Fork San Gabriel River in the Brazos River Basin.

3.1 Geology

The bedrock geology of the APE is mapped as Edwards and Comanche Peak Limestones, undivided (Early Cretaceous) (Kec) consisting of dolostone, limestone, and chert inclusions (Barnes 1992).

3.2 Soils

Soil formation is a function of local climate, biology, parent material, topography, and time, and so it is clearly tied to environment as defined above. Accordingly, soil can serve as a proxy for environmental conditions of the present and past. Defining soils as they are relevant to investigations of cultural resources, however, is useful because of how they are characterized and mapped by the Natural Resources Conservation Service, formerly Soil Conservation Service. Though agricultural in nature, county soil surveys provide a description of soil characteristics, including depth, color, inclusions, etc., which can be used to elucidate site formation processes. Two soils are mapped in the project area (NRCS 2019; Werchan and Coker 1983) (Appendix A, Exhibit 3) and are presented in Table 1.

Table 1. Soil Survey data in Area of Potential Effect.

Soil or Series Name	***Drainage***	***Soil Depth***	***Associated Landform***
Eckrant extremely stony clay, 0 to 3 percent slopes (EeB)	Well-drained; moderate slow permeability	12 inches to bedrock	Ridges
Eckrant-Rock outcrop association, 1 to 10 percent slopes (ErE)	Well-drained; moderate slow permeability	12 inches to bedrock	Ridges

3.3 Vegetation and Wildlife

Flora and fauna of the ecotone include species that are representative of the Balcones Canyonland, the Limestone Cut Plain, and the Northern Blackland Prairie as well as endemic species (Blair 1950). Major game species of the region include whitetail deer, javelina, and several species of bird, and pronghorn and bison were periodically present further back in history. The region's natural vegetation is typically a grassland-woodland mosaic (Ellis et al. 1995).

The natural vegetation of the region falls under the Balcones Canyonland ecoregion, and was dominate woodland vegetation, with oak and juniper as the dominating tree species. Grasslands are common in broad valleys and on adjacent slopes (Riskind and Diamond 1988). The Balcones Canyonland is characterized by a high degree of plant community diversity. This diversity is attributable to the ecoregion's variety of soil orders and their variation in texture and depth, as well as the variable elevation and mesic or xeric conditions (Riskind and Diamond 1988). The vegetation of the Limestone Cut Plains is similar to the vegetation of the Balcones Canyonland, although it is less diverse (Griffith et al. 2007).

Prior to European settlement in the region, natural landscape-scale disturbances, most notably fires, were important to maintain the system. Natural fires from lightning strikes kept Ashe juniper confined to limited areas. Fire suppression programs and overgrazing in historic times has greatly affected the vegetation communities of the Balcones Canyonland and the Limestone Cut Plains. Ashe juniper, mesquite, and prickly pear have all increased in abundance, while grasslands have decreased (Griffith et al. 2007; Riskind and Diamond 1988).

3.4 Current and Past Climates

Georgetown has a climate classified as warm temperate (hot summers and cool winters), with precipitation ranging from 35 to 40 inches in an average year. Precipitation is less in the western part of the ecoregion and greater in the east (Bailey 2014).

Because most cultural resources originate in the period between the Last Glacial Maximum and the colonization of the western hemisphere by emigrants of the European continent, it is necessary to consider past climates, too. Since past climatic conditions cannot be observed (i.e., measurements did not begin in this region until the late 19th century), proxy data must be relied upon to reconstruct past conditions. Proxy data do not directly reflect past environments, but they can be used to infer conditions under which they form (Ellis et al. 1995).

Based on fossil pollens (Bousman 1998), phytoliths (Joines 2005), microfaunal remains (Toomey 1993), soil chemistry (Nordt et al. 2002), and speleothems (Musgrove et al. 2001), it is clear that climatic conditions of the past approximately 20,000 years have steadily become warmer and increasingly arid with several punctuated episodes. The transition from the Pleistocene to the Holocene at approximately 11,700 years ago was marked by an increase in warmth and aridity. In addition to increased warmth and aridity, the Holocene has been characterized by increasing

seasonal variation of temperatures and precipitation. Peak warmth and aridity occurred during the mid- to late-Holocene Altithermal. Following the Altithermal, conditions similar to the early-Holocene returned, but warmth and aridity increase to the present.

4.0 CULTURAL HISTORY

Generally, the cultural chronology of Central Texas can be divided into three periods, prehistoric, protohistoric, and historic. The protohistoric effectively marks the boundary between the prehistoric and historic periods, and is characterized by the initial introduction of Europeans into the western hemisphere. The following description of Central Texas' cultural history is a gross compilation of a vast suite of data and interpretations (cf. Collins 1995, 2004).

4.1 Prehistoric

The prehistoric people of Central Texas were primarily hunter-gatherers. Through the last 75-plus years of archaeological research in the region, identifiable and repeated patterns in artifact assemblages have indicated major shifts in subsistence strategies and technology through time. As a result, the prehistoric period now has three subdivisions: Paleoindian, Archaic, and Late Prehistoric.

The Paleoindian period (ca. 12,500-8800 years ago) includes the earliest human occupation of North America, which extends back into the late Pleistocene. During this time, people hunted large game, but they generally had a broad diet. This included plant foods, small game, in addition to megafauna that went extinct with the close of the Pleistocene (i.e., mammoth, mastodon, bison, horse, camel, etc.). Technological traditions further subdivide the Paleoindian period into Early and Late.

The Archaic period (ca. 8800-1250 years ago) of Central Texas was the longest period in prehistory, and it is generally marked by the introduction of hot rock cooking in addition to the proliferation of a wide variety of diagnostic projectile points. Cooking with fire-heated rocks developed with increased reliance on plant foods, which may have been a response to diminishing game resources and ultimately climatic change or variation. This is not to say that human agency did not play an important role in the shift of economic and subsistence strategies. The Archaic period is subdivided into Early-, Middle-, and Late-Archaic periods, each with a slight variation in response to cultural shifts and ambient conditions.

The Late Prehistoric (ca. 1250-250 years ago) was a relatively brief period, but it was marked by a shift in weapon technology: the introduction of the bow-and-arrow. Like the Archaic, the Late Prehistoric people utilized hot rock cooking to process plants to edible forms. There also appeared to be increasing contact among groups, which resulted in increased trade of materials and evident competition over resources.

4.2 Protohistoric and Historic

Spanish Entradas (expeditions) mark the onset of European influence in the New World. These explorations effectively scouted the new land and resulted in the settlement and establishment of missions spread throughout what has become northern Mexico and Texas. The Spanish entered into what is now Texas along the *El Camino Real de los Texas*. During this time, European populations and influence steadily increased as native populations steadily diminished.

Williamson County was formed from Milam County in March 1848; Georgetown became the county seat later that same year. The early economy of Williamson County, from the 1850s through the 1860s, was dominated by family operated farms which primarily produced wheat and corn (Odintz 2016). In the 1870s, railways began to crisscross the county, allowing for a boom in the agricultural business. This boom lasted through the 1920s, before the economy slowed due to the Great Depression. After the county recovered from the Great Depression, both the economy and the population grew. By the 1980s, the economy had diversified. Construction and manufacturing became significant parts of the economy; agriculture also remained important. Proximity to Austin helped the population, especially in Round Rock and Georgetown, to grow rapidly. As of 2014, roughly 489,250 people lived in Williamson County.

Georgetown was founded in 1848. In addition to being the seat of Williamson County, Georgetown gained importance during its early history with the establishment of Southwestern University and with its location along a major cattle trail (Scarbrough 2015). Population and economic diversity in Georgetown increased steadily until the 1960s, when the city began to experience rapid growth. In 2000, the population was recorded as 28,339. Manufacturing, quarries, and industries related to commercial and residential development are main components of the modern economy of Georgetown.

5.0 METHODS

The methods described below were employed to identify and characterize cultural resources present within the APE to the extent practicable. Desktop review focused on identifying previously known cultural materials, while fieldwork was used to both search for unknown cultural resources and gather more information based on the desktop review.

5.1 Desktop Review

To search for known cultural resources within and in proximity to the APE, reviews of the Texas Archeological Sites Atlas (Atlas), the list of State Archeological Landmarks, and the National Register of Historic Places were conducted. Historic-period maps and aerial images that include the project area were reviewed for evidence that the location contained buildings or other features that may be considered historic (at least 50 years old).

5.2 Intensive Pedestrian Survey

In order to examine the approximately 31.4-acre APE for previously unknown cultural resources, and to gather additional information based on the desktop review, an intensive pedestrian survey was conducted.

The ground surface in the APE was systematically inspected by two archaeologists walking parallel transects spaced approximately 30 meters or less apart for 100 percent coverage of the project area. Shovel tests were placed in areas that appeared to be previously undisturbed or had less than 30 percent visibility.

As a general method, shovel tests are excavated to varying depths that target Holocene-aged soils. Sediment was excavated in arbitrary 20-cm levels to depth and passed through ¼-inch hardware mesh. Characteristics and contents of shovel tests are recorded with photographs, forms and notes, and a hand-held global positioning system (GPS) unit; upon completion of excavation and documentation, the unit holes and artifacts, if present, are backfilled. Cultural materials encountered through the course of shovel test excavations are described and returned to their approximate origin.

Archeological sites, if encountered, would be recorded with the Texas Archeological Research Laboratory and be assessed for eligibility for inclusion in the NRHP or designation as a SAL as appropriate. This survey has a “no-collection” policy; therefore, diagnostic artifacts (if encountered) would be documented in the field and not collected. Records will be temporarily housed in Terracon’s office in Austin and will be permanently curated by the Center for Archaeological Studies (CAS) at Texas State University upon completion of the project.

5.3 Artifact Analysis

Artifacts, if encountered through the course of investigations, would be described and photographed on-site, and then returned to their respective places. The importance of the artifacts is in their capacity to relate temporal and other information about the former occupants of the site, and as such they are categorized according to their material and subdivided by unique or diagnostic characteristics.

5.4 National Register of Historic Places and State Antiquities Landmark Criteria

For a historic resource to be deemed eligible for inclusion in the National Register of Historic Places (NRHP), the resource must be at least 50 years old and must possess significance and integrity. The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location design, setting, materials, workmanship, feeling, and association and:

A. That are associated with the events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or
C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. That have yielded, or may be likely to yield, information important in our prehistory or history (36 CFR 60.4).

Additionally, the State of Texas affords important cultural resources a level of protection beyond that of NRHP status if the resource meets the criteria for listing as a State Antiquities Landmark (SAL). The SAL criteria are divided into four categories based on the type of resource: archaeological site, shipwreck, cache and collection, and historic structure. The criteria for archaeological sites are:

1) The site has the potential to contribute to a better understanding of the prehistory and/or history of Texas by the addition of new and important information;
2) The site's archeological deposits and the artifacts within the site are preserved and intact, thereby supporting the research potential or preservation interest of the site;
3) The site possesses unique or rare attributes concerning Texas prehistory and/or history;
4) The study of the site offers the opportunity to test theories and methods of preservation, thereby contributing to new scientific knowledge; and
5) There is a high likelihood that vandalism and relic collecting has occurred or could occur, and official landmark designation is needed to ensure maximum legal protection, or alternatively, further investigations are needed to mitigate the effects of vandalism and relic collecting when the site cannot be protected (Title 13, Rule 26.10).

6.0 RESULTS

6.1 Desktop Review

A review of the Texas Archeological Sites Atlas database with emphasis on 0.5-mile buffer indicates that no previously recorded sites are located within the APE or within the search buffer (Appendix A, Exhibit 4). No State Antiquities Landmarks (SALs), Registered Texas Historic Landmarks (RTHLs), or National Register of Historic Places (NRHP) properties are present in the buffer search.

Three previous investigations have been conducted within the 0.5-mile search buffer and are summarized in Table 2. No portion of the APE appears to have been previously surveyed.

Table 2. Summary of previous investigations within 0.5-mile buffer.

Year	*Antiquities Code Permit #*	*Company*	*Sponsor*
1994	1463	Lone Star Archeological Services	--
2006	3719	American Archaeology Group	City of Georgetown
2006	3806	American Archaeology Group	City of Round Rock

Historic-period topographic maps dating back over 100 years cover the project area. Several years were examined including 1893, 1928, 1949, 1951, and 1982. No structures are apparent within the project area in topographic maps.

Historic aerials were also reviewed, the earliest of which was dated 1941. Others were dated 1953, 1962, 1964, 1974, 1981, 1988, 1995, 2004, and 2015. In the photos from 1941, 1953, 1962, 1964, 1974, and 1981, no structures can be observed in the project area, and there is little development in the vicinity of the project area. In the photos from 1988, 1995, 2004, and 2015, DB Wood Road can be observed, along with increasing development in the area. No structures can be observed in the project area in historic aerials.

6.2 Intensive Pedestrian Survey

The intensive pedestrian survey resulted in the excavation of sixteen shovel tests in areas which were undisturbed with less than 30 percent ground visibility (Appendix A, Exhibit 5). Overall, the APE was covered short grasses with prickly pear and oak tree vegetation; ground visibility within the project area was generally decent, ranging from 30 to 60 percent (Appendix B, Photos 1 and 2). Large areas of the project area contained bedrock at ground surface (Appendix B, Photo 3). The project area was generally undeveloped and undisturbed, with the exception of unpaved two-track roads across the project area and excavated karsts/sinkholes (Appendix B, Photos 4-6). Along the southern project boundary, disturbances were present from construction activities related to a housing development south of the project area (Appendix B, Photo 7).

The soil in the shovel tests was predominately clay, with a generally shallow depth to bedrock (Appendix B, Photo 8). No cultural materials were observed during the excavation of shovel tests. See Appendix C for details in the Shovel Tests Log. One archeological site, 41WM1408, was recorded during the course of the current survey and is described below.

6.2.1 Site 41WM1408

Site 41WM1408 was recorded in the northeastern portion of the project area as a prehistoric-age lithic procurement area, with a size of approximately 31 meters north-south by 35 meters east-west (see Appendix A, Exhibit 5) (Appendix B, Photo 9). The site was in an upland, generally level

setting, with large areas of exposed bedrock. Vegetation at the site consisted of sparse short grass cover, with prickly pear cactus. Oak trees and mesquite trees were located north of the site. Also north of the site, the ground begins to slope downward to the Middle Fork San Gabriel River (Appendix B, Photo 10).

The majority of artifacts observed at 41WM1408 consisted of cores, secondary flakes, and tertiary flakes (Appendix B, Photos 11-13). The majority of lithics were made from a cherty limestone material that was available on the ground surface (Appendix B, Photos 14 and 15). One secondary flake, made from a coarse-grained chert with cherty limestone inclusions, was observed (Appendix B, Photo 16). A biface made from grey chert, likely not available as a raw material at the site, was also noted (Appendix B, Photos 17-19). The chert that this biface is made from is both darker in color and finer grained than the raw materials observed at 41WM1408. Artifacts at the site were generally present at a low density, with less than 15 lithics observed in any one square meter area.

The majority of the ground surface at 41WM1408 consisted of exposed bedrock; a shovel test was excavated in a portion of the site which contained soils and no buried deposits were observed (Appendix B, Photo 20). No diagnostic artifacts were observed. In general, 41WM1408 appears to be an opportunistic use of raw materials available near a water source. No burned rock fragments or other features were observed to suggest the use of the site as an occupation area.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Terracon archaeologists conducted an intensive pedestrian survey of an approximate 31.4-acre area in advance of the proposed construction of school facilities by Georgetown Independent School District on currently undeveloped land in western Georgetown, Williamson County, Texas. Sixteen shovel tests were excavated. One prehistoric-age site, 41WM1408, was recorded within the project area.

Site 41WM1408 consists of a low-density, prehistoric-age lithic procurement site with no observed buried deposits. Terracon recommends 41WM108 as ineligible for inclusion on the NRHP under Criterion D. Given the low density of cultural materials within the site and the lack of buried deposits present, Terracon does not believe that the site is likely to yield information important in prehistory, thus, it is not eligible under Criterion D. Site 41WM1408 does not fall under Criteria A, B, or C.

In addition, 41WM1408 should not be designated as a SAL, as it is not eligible under any criteria for evaluating archaeological sites. The site lacks intact deposits, does not possess unique or rare attributes, and is not likely to contribute to new scientific knowledge or a better understanding of Texas history.

It is Terracon's opinion that there are no historic properties in the APE eligible for listing on the NRHP or designation as a SAL. Therefore, Terracon recommends that the project be allowed to proceed as future construction of the school facilities will not affect historic properties. In the unlikely event that human remains or intact cultural resources are discovered after THC's review, activities should cease in the vicinity of the discovery and Terracon, the Texas Historical Commission's Archeology Division, or other proper authorities should be contacted.

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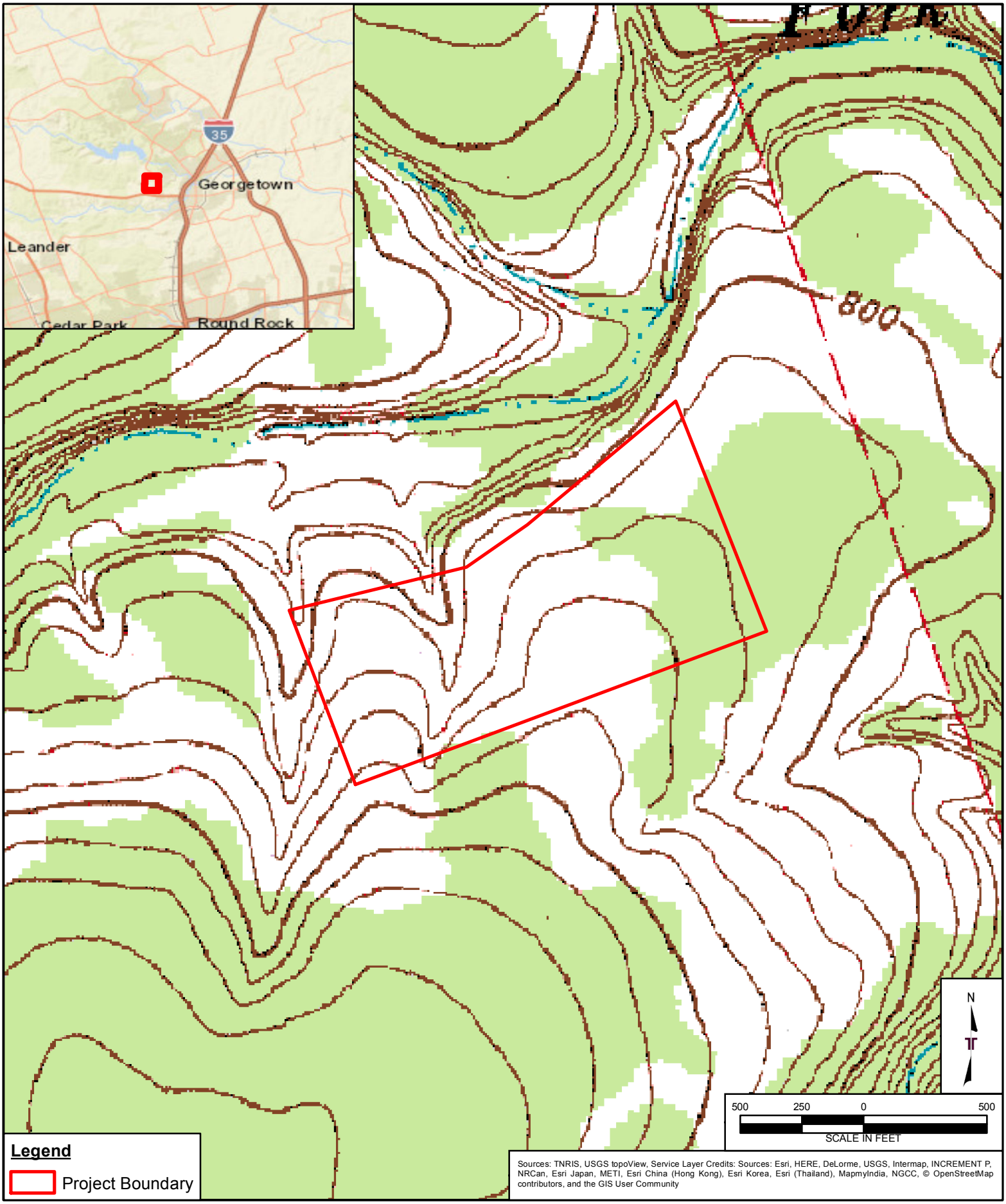
APPENDIX A
Exhibit Maps



Project Mngr:	CG
Drawn By:	Terracon
Checked By:	CG
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Project No.	96197746A
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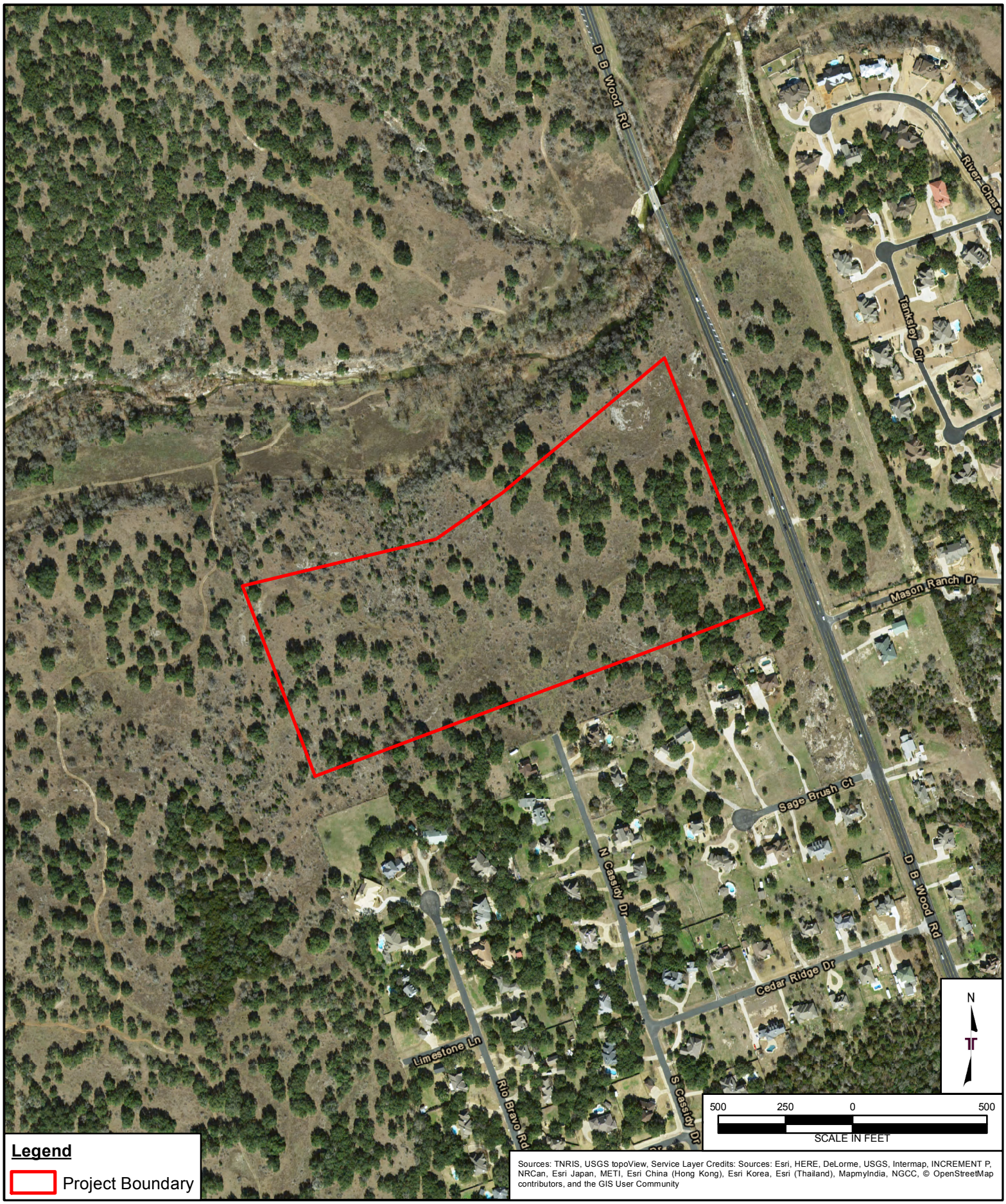
1982 USGS Topographic Map: Georgetown

GISD Proposed Middle School

DB Wood Road at Mason Ranch Drive
Georgetown, Williamson County, Texas

EXHIBIT

1



Legend

Project Boundary

Sources: TNRIS, USGS topoView, Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

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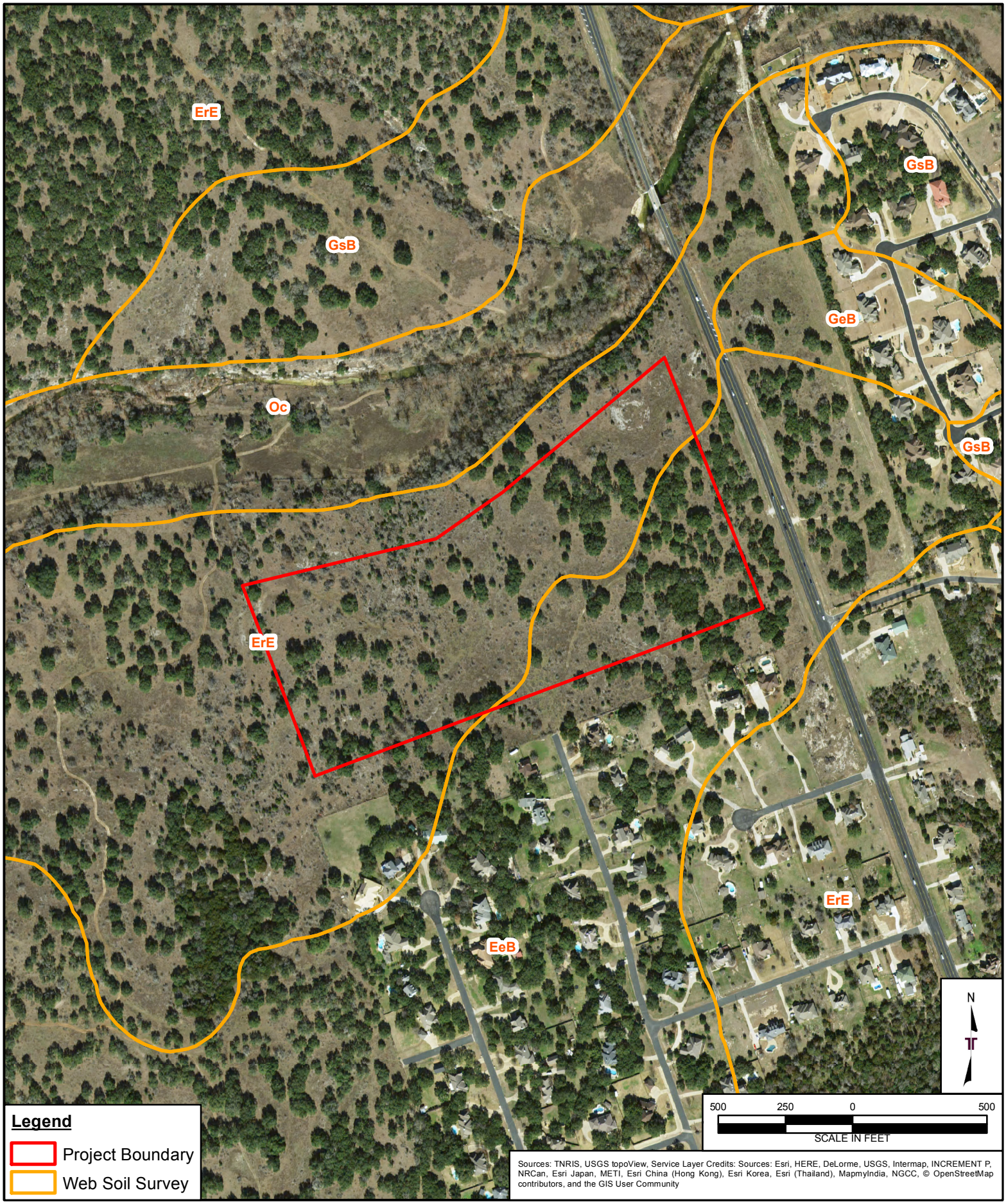
2015 Aerial Photograph

GISD Proposed Middle School

DB Wood Road at Mason Ranch Drive
Georgetown, Williamson County, Texas

EXHIBIT

2



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USDA Web Soil Survey

GISD Proposed Middle School

DB Wood Road at Mason Ranch Drive
Georgetown, Williamson County, Texas

EXHIBIT

3

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APPENDIX B
Photographs

Appendix B. Photographs

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 1. Area of lower ground visibility in the northwestern portion of the project area. Note short grass vegetation. View to the east.

Photo 2. Area of higher ground visibility in the northeastern portion of the project area. Note short grass vegetation. View to the north.

Appendix B. Photographs
GISD Proposed Middle School ■ Georgetown, Williamson County, Texas
Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 3. Area of exposed bedrock in the central portion of the project area. View to the south.

Photo 4. Unpaved two-track road in south-central portion of the project area. View to the northwest.

Appendix B. Photographs
GISD Proposed Middle School ■ Georgetown, Williamson County, Texas
Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 5. Excavated karst/sinkhole in the south-central portion of the project area. Note shallow soils over bedrock. View to the east.

Photo 6. Backfilled excavated karst/sinkhole in the southwestern portion of the project area. View to the southeast.

Appendix B. Photographs

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 7. Southern project boundary. Note silt fencing and disturbances on the right side of photo from construction of a housing development south of the project area. View to the east.

Photo 8. Shovel Test 01. Note shallow depth to bedrock.

Appendix B. Photographs

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 9. General view of 41WM1408. Note exposed bedrock, upland setting, and short grass vegetation. View to the southeast.

Photo 10. View from southern portion of 41WM1408, towards Middle Fork San Gabriel River. View to the northwest.

Appendix B. Photographs
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Photo 11. Cores and secondary flakes from 41WM1408. Note cherty limestone material.

Photo 12. Secondary and tertiary flakes from 41WM1408. Note cherty limestone material.

Appendix B. Photographs
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Photo 13. Core and secondary flake from 41WM1408. Note cherty limestone material.

Photo 14. Cores and tertiary flakes from 41WM1408. Note cherty limestone material. Artifacts on exposed limestone bedrock present on ground surface at site.

Appendix B. Photographs

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 15. Ground surface at 41WM1408. Note artifacts made of cherty limestone on exposed limestone bedrock.

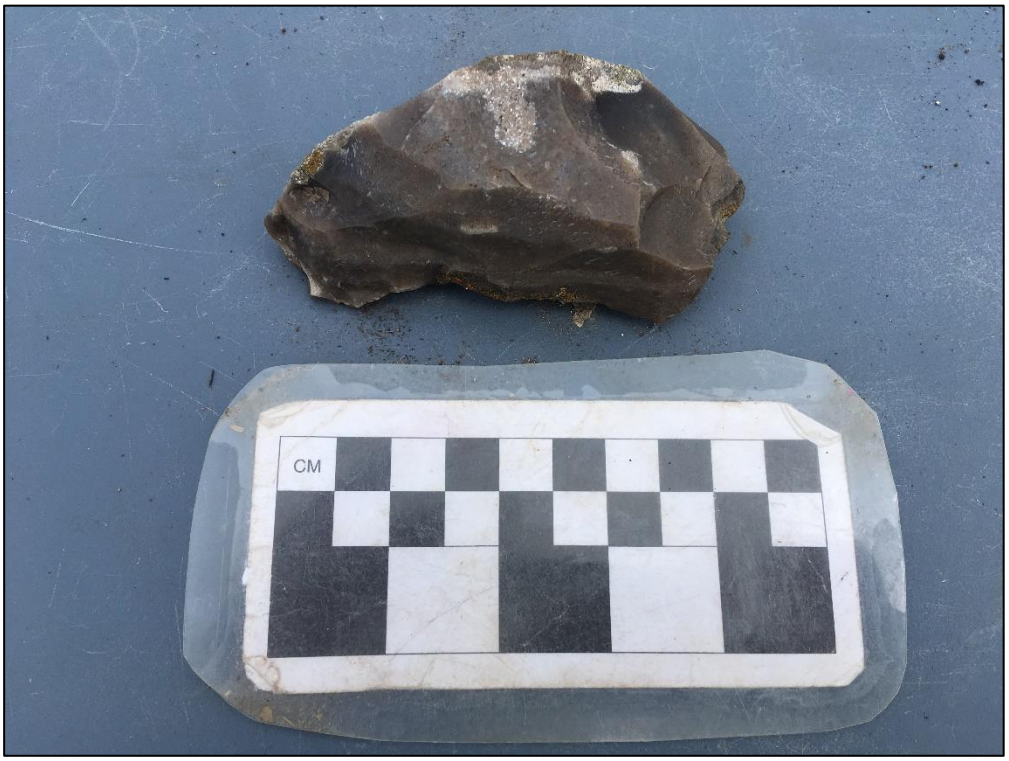

Photo 16. Secondary flake from 41WM1408, made from coarse-grained chert with cherty limestone inclusions.

Appendix B. Photographs
GISD Proposed Middle School ■ Georgetown, Williamson County, Texas
Terracon Project No. 96197746A ■ Photos taken October 9, 2019

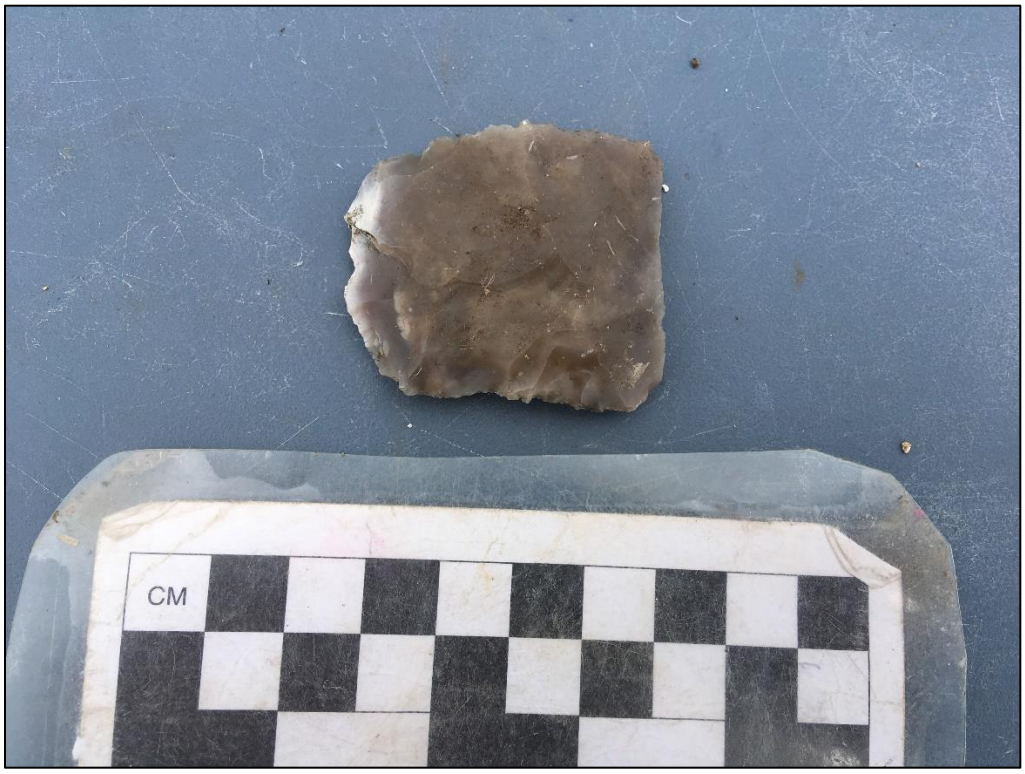

Photo 17. Biface from 41WM1408, made from grey chert not available as raw material at site.

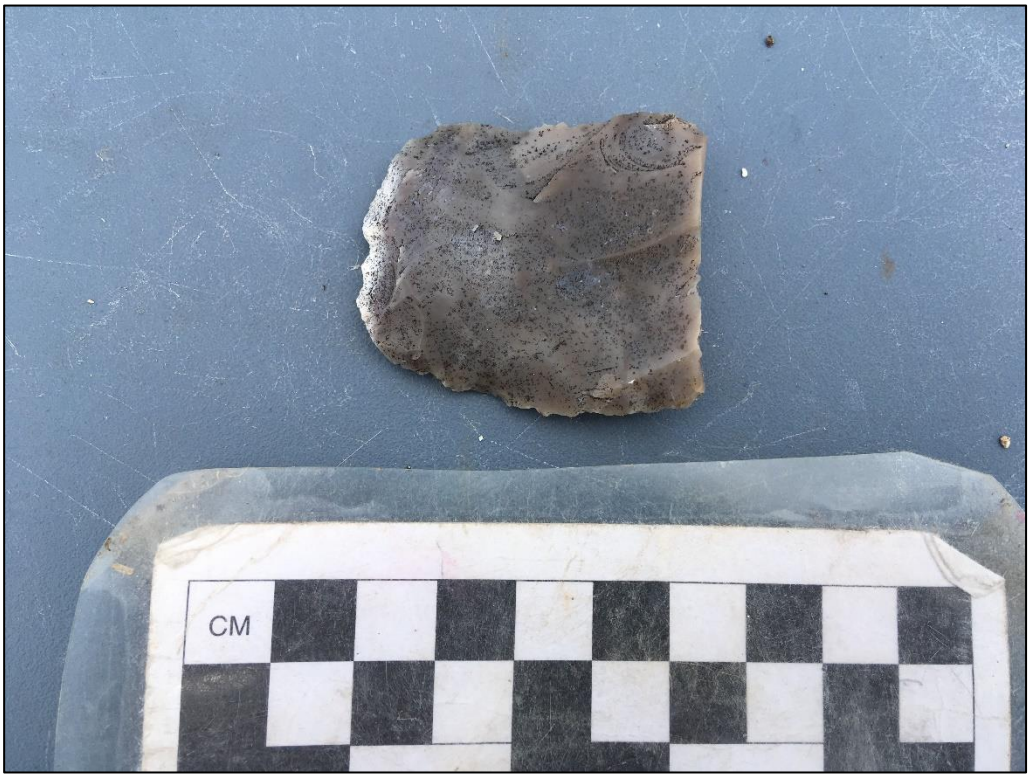

Photo 18. Biface from Photo 17, reverse side.

Appendix B. Photographs

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Terracon Project No. 96197746A ■ Photos taken October 9, 2019

Photo 19. Edge view of biface from Photos 17 and 18.

Photo 20. General view of 41WM1408 from southern portion of site. Note Ruben Castillo at ST13. View to the northwest.

APPENDIX C
Shovel Test Log

Appendix C. Shovel Test Log

GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Shovel Tests from October 9, 2019 ■ Terracon Project No. 96197746A

ST ID #	Depth (cmbs)	+/-	Ground cover	Munsell & Color	Texture	% Gravels	Comments
ST 01	0-20	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 02	0-10	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets, deteriorating and weathered limestone throughout strata, about 30 meters northwest of boring site; terminated at bedrock.
ST 03	0-20	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 04	0-25	-	90%+	10YR 3/2 Very Dark Greyish Brown with 7.5 YR 4/2 Brown (Near Roots)	Clay	Very Many (>50%)	Very rocky soil, dense and hard, very rooty, soil color changes around larger roots, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 05	0-27	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 06	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, very fine rootlets, rodent bioturbation, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 07	0-27	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets and roots in top 5 centimeters, deteriorating and weathered limestone throughout strata, terminated at bedrock.

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GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Shovel Tests from October 9, 2019 ■ Terracon Project No. 96197746A

ST ID #	Depth (cmbs)	+/-	Ground cover	Munsell & Color	Texture	% Gravels	Comments
ST 08	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets confined to top 5 centimeters, deteriorating and weathered limestone throughout strata, insect casings and remains.
ST 08	15-30	-	90%+	7.5YR 3/2 Dark Brown	Clay	Very Many (>50%)	Slickensides present, decaying weathered limestone cobbles, terminated at bedrock.
ST 09	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, rootlets, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 10	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Very rocky soil, dense and hard, roots and rootlets, deteriorating and weathered limestone throughout strata, terminated at bedrock.
ST 11	0-20	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Very dry, roots and rootlets, limestone gravels throughout.
ST 11	20-35	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/8 Strong Brown	Clay	Very Many (>50%)	Mottle changes at 20 centimeters below surface, weathered limestone rocks and cobbles, dry, dense, terminated at subsoil.
ST 12	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Very dry and dense, rootlets, limestone gravels and cobbles, terminated at bedrock.
ST 13	0-35	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Very dry and dense, test at approximate centroid of Site 41WM1408, encountered chalk deposit at 25 centimeters below surface along with weathered limestone, terminated at bedrock.

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GISD Proposed Middle School ■ Georgetown, Williamson County, Texas

Shovel Tests from October 9, 2019 ■ Terracon Project No. 96197746A

ST ID #	Depth (cmbs)	+/-	Ground cover	Munsell & Color	Texture	% Gravels	Comments
ST 14	0-20	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Rootlets at top, dry and dense, large cobbles and poor sorted gravels throughout; terminated at bedrock.
ST 15	0-15	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/6 Strong Brown	Clay	Very Many (>50%)	Rootlets at top, dry and dense, large cobbles and poor sorted gravels throughout.
ST 15	15-30	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/8 Strong Brown	Clay	Very Many (>50%)	Soil change at 15 centimeters below surface, very dry and dense, terminated at bedrock.
ST 16	0-25	-	90%+	10YR 3/2 Very Dark Greyish Brown mottled with 7.5 YR 5/8 Strong Brown	Clay	Many (>20%)	Rootlets, dry and dense, inside wooded area, less erosion here, terminated at bedrock (25 centimeters below surface).