

WORK AUTHORIZATION NO. 3

PROJECT: Corridor C SH 29 Bypass

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **March 13, 2017** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Atkins North America, Inc.** (the "Engineer").

Part 1. The Engineer will provide the following Services set forth under Phase I in Attachment "B" of this Work Authorization. While a brief explanation of Phases II and III are also provided, these Services will be Authorized under Supplemental Agreements based upon the results of the Services set forth under Phase I and later Phase II in Attachment "B" of this Work Authorization. The Phases are anticipated to be as follows:

- Phase I – Field Excavations and Interim Reporting
- Phase II – Laboratory Analysis, Draft and Final Reporting, and Curation Preparation
- Phase III – Curation Submission

Part 2. The maximum amount payable for services under Phase I in this Work Authorization without modification is **\$920,244.**

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on **October 31, 2023.** The Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this

Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this _____.

ENGINEER:

Atkins North America, Inc.

By: *Jennifer K. Sorenson*
Signature

Jennifer Sorenson
Printed Name

Vice President, Sector Manager
Title

COUNTY:

Williamson County, Texas

By: _____
Signature

Bill Gravel
Printed Name

County Judge
Title

LIST OF ATTACHMENTS

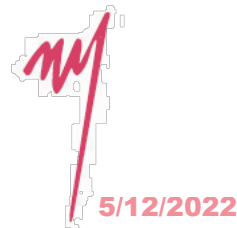
Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C – Services to be Provided by Subconsultant

Attachment D - Work Schedule

Attachment E - Fee Schedule



ATTACHMENT A
SERVICES TO BE PROVIDED BY THE COUNTY

In general, Williamson County and its representatives to their best efforts will render services as follows:

1. Obtain Rights of Entry from landowners that are unwilling to grant access to the Engineer.
2. Provide timely reviews and decisions necessary for the Engineer to maintain the project work schedule.
3. Provide Engineer with plan changes.

The following services, if not rendered by Williamson County, will be rendered by the Engineer at Williamson County's expense and are noted as line items in Attachment "E" of this Work Authorization.

1. Provision of a portable sanitary waste station.
2. Fencing of the ROW between stations 240+00 and 244+60 as noted on EPIC sheets.
3. Providing a backhoe and backhoe driver for backhoe investigations.
4. Providing a large truck and driver to haul dirt removed during backhoe investigations.

ATTACHMENT B
SERVICES TO BE PROVIDED BY THE ENGINEER
DATA RECOVERY EXCAVATIONS FOR SITE 41WM1398 FOR THE CORRIDOR C
SH 29 BYPASS

In accordance with the Research Design of Investigations for the Texas Antiquities Permit (TAP) concurred upon by the Texas Historical Commission (THC), the Engineer will conduct the following phased deliverables in fulfillment of the conditions of the TAP per the Antiquities Code of Texas of 1969, as amended. A brief summary of the components of each of the phases is provided below with a more detailed explanation being provided within the Research Design of Investigations for the TAP. Also, in accordance with Research Design of Investigations, the recommendation of the THC and with the permission of Williamson County, the Area of Potential Effect (APE) data recovery excavations is the entirety of the known boundaries of archaeology site 41WM1398 within the future highway ROW, which includes all of the deep impact areas and the shallow impact areas within the archaeological site, for a combined total surface area of 3,100 m² (33,367.5 sq. ft) or 0.31 ha (0.77 acres).

PHASE I: FIELD EXCAVATIONS AND INTERIM REPORTING

1. Mobilization

In addition to basic field preparations, the Engineer will procure a backhoe and backhoe driver, fencing and fencing installation, a portable waste sanitation station as well as a truck for the removal of backdirt from the site if these have not been rendered by Williamson County.

2. Backhoe Investigations

Following the reopening and widening of Trench 1, and possibly Trench 2, from the previous Testing Phase at site 41WM1398, a series of new backhoe trenches will be established across the APE to (1) locate and expose additional deeply buried features and living surfaces and (2) allow for the observation and study of the terrace sediments for the geomorphological analysis. A dirt truck will be used to move the mechanically excavated sediments to an area within the right-of-way that will not be excavated.

The backhoe and dirt truck will return toward the end of the field excavations to search for additional and deeper buried cultural horizons if the Principal Investigator deems it necessary. The backhoe and truck will also be used to backfill the excavation trenches and units at the completion of the field work.

Based on the observations in the walls of the trenches, the Principal Investigator will make decisions on placement of hand excavation units.

3. Hand Excavations

Archaeologists will reestablish the excavation grid of 1-x-1 m units created during the Testing Phase located over Features 4, A, B, and C. The placement of the hand excavation units will be at

the direction of the Principal Investigator based on the findings in the field from the previous Testing at the site, the profiles revealed from the backhoe trenches, and the findings while in the field.

4. Geoarchaeological/Geomorphological Analysis

Geomorphological studies will be conducted by an advanced degreed archaeologist with specialized training in Geoarchaeology and Geomorphology. The geomorphology of the archaeological site will be analyzed, as well as that of the adjacent meandering stream, to the greatest extent possible within the highway ROW, in order to provide a complete understanding of the landform development and its human usage through time. Historic and recent aerial photographs, historic topographic maps, and any available LiDAR imagery will be examined to study changing stream channels and erosional impacts through recent history that have altered the site. Geoarchaeologists will utilize the backhoe trenches across the site as well as the walls of the hand excavations and the adjacent cutbank to examine the soils and facies that formed during the terrace development.

In addition to the macro-stratigraphic investigations, geoarchaeologists will collect stratigraphic column samples for pedological analysis and AMS radiocarbon dating. The exact number and placement of the columns will be decided in the field after completion of the backhoe trenching, hand excavations, and observations of the exposed sediments.

5. Artifact Collection and Initial Laboratory Analysis

All diagnostic artifacts encountered will be documented *in situ* if possible. All collected artifacts will be transported to the Engineer's in-house archaeological laboratory in Austin for initial processing. Artifacts anticipated to be collected include charcoal, bone, mussel shell, *rabdotus* shell, lithics, groundstone, fire cracked and burned rock, and soil samples.

6. Reporting

Following completion of the field work investigations, the Engineer will prepare an Interim Report describing the findings during the investigations and preliminary recommendations, and send it to Williamson County for review and comment. Following Williamson County's review of the Interim Report, The Engineer will address comments and resubmit the Interim Report to Williamson County for final approval. The Engineer will then submit a copy of the Interim Report to the THC for their review and comment through the THC's eTrac system. After review, the Interim Report will be revised to address any THC comments. Upon concurrence of the Interim Report by the THC, the project will be allowed to proceed while the Engineer completes the Phases II and III (described below : laboratory analysis, draft and final report writing, review process, and curation submission).

7. Assumptions

- All work included in this scope is based on the revised study plan to be provided to the THC.

- Per the TCH study plan, the Engineer anticipates opening 6 new trenches across the APE in addition to reopening Trench 1 and possibly Trench 2 from the previous Testing Phase of site 41WM1398. See the attached trenching exhibit for the excavation plan included in the draft study plan.
- Excavations by the backhoe trenches are estimated to be a total of 280 m (926. ft) total lengths x 1 m width (3.28 ft) (one backhoe bucket width) x 1.75 m (5.74 ft) depth for a total of 494.83 m³ (17,475 ft³).
- Approximately 20 m³ of soil will be examined by hand excavations.
- Between two and four soil columns will be placed for geoarchaeological and geomorphological investigation.
- The number of samples are estimated to be a minimum of 50 samples from soil profile columns.
- Based on the Testing Phase, 25 samples are expected from features.
- The Phase 1 fee estimate assumes a total of 75 samples. The excavation phase may result in the discovery of unanticipated artifacts that require additional samples.
- The project may proceed upon concurrence of the interim Data Recovery report by the THC.
- The results of Phase I will be used to inform the scope and fee for Supplemental Work Authorizations for Phase II and III.
- Field work will begin within approximately 2 months from approval of the WA with the procurement of fencing, portable sanitary waste station, backhoe/backhoe driver and truck for backdirt removal as well as the completion of other preparations necessary for fieldwork to commence.
- Backhoe investigations will take approximately 1 week with 3 persons for each of the initial opening of trenches and backfilling of trenches.
- Hand excavation is estimated to require 5 months with 5 FTEs.
- Artifact collection and initial laboratory analysis will take approximately 1 month after completion of field investigations.
- Reporting and client/agency (THC) review/comment will take approximately 3 months from the completion of field investigations and initial laboratory analysis. The Engineer will respond to 1 round of comments from each the client and the THC.
- The THC has 30 days to review to all materials submitted.
- All field work and deliverables will comply with the Engineer's quality, safety, security and environmental standards.

PHASE II: LABORATORY ANALYSIS, DRAFT AND FINAL REPORTING, AND CURATION PREPARATION

1. Laboratory Analysis and Curation Preparation

Collected artifacts will be preparation for curation. A more detailed description of this analysis is provided in the Research Design of Investigations in the TAP.

2. Draft and Final Reporting

Following completion of the field work, Interim Report, and laboratory analysis, the Engineer will prepare a Draft Report, including a discussion of the field investigations and laboratory analysis, and send it to Williamson County for review and comment. Following Williamson County's review of the Draft Report, the Engineer will address comments and resubmit the Draft Report to Williamson County for final approval. The Engineer will then submit a copy of the Draft Report to the THC for their review and comment through the THC's eTrac system. After review, the Final Report will be revised to address all THC comments. The Final Report will meet the report format standards of 13 TAC 26.24, including satisfaction of the THC and CTA's excavation reporting guidelines.

The Engineer will provide one unbound copy and tagged PDF file of the Final Report (including a no-site location map version), and a GIS shapefile of the project area to the THC. Copies of the report will also be furnished to Williamson County and to various repositories across the state, in accordance with THC permit requirements. The Engineer will also provide electronic versions of the report to the THC as directed at the time of submittal.

3. Assumptions

- Phase II scope and fee will be revised in a Supplemental Work Authorization based upon the results of Phase I.

PHASE III: CURATION SUBMISSION

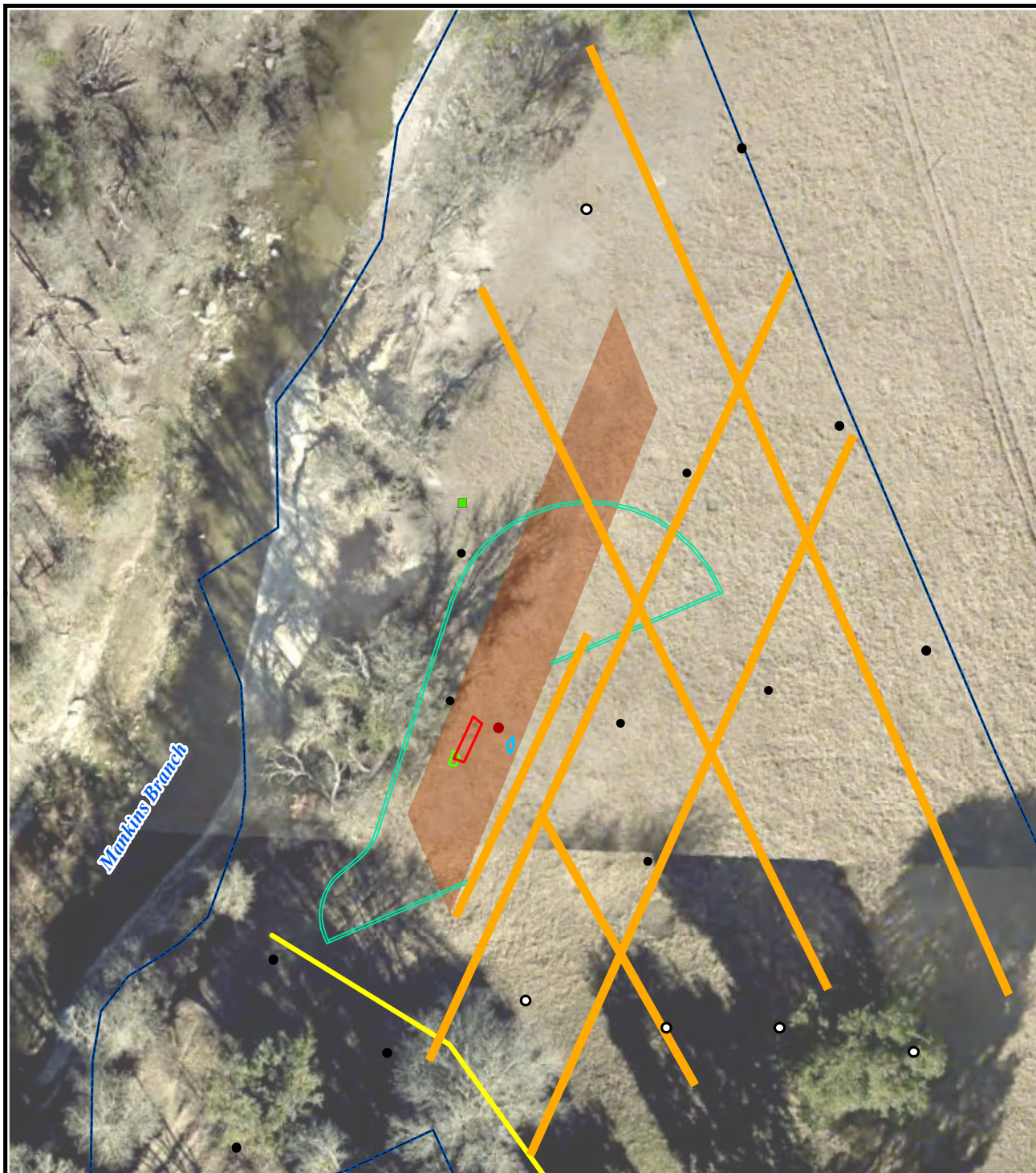
Recovered artifacts, photographs, and field paperwork will be curated at the Center for Archaeological Studies at Texas State University in San Marcos, Texas in accordance with THC, CTA, and CAS requirements.

Assumptions

- Phase III scope and fee will be revised in a Supplemental Work Authorization based upon the results of Phase I and Phase II.
- Based upon the volume of material generated for the previous Testing Phase of 41WM1398, the volume of material to be curated as part of Data Recovery is estimated to be approximately 30 boxes of materials and approximately 9 linear inches of records.

ATTACHMENT C
SERVICES TO BE PROVIDED BY THE SUBCONSULTANT
GEOARCHAEOLOGICAL/GEOMORPHOLOGICAL CONSULTATION

As requested by the THC, the Engineer has retained Charles D. Frederick PhD, PG.



Legend

- Negative Shovel Test
- Positive Shovel Test
- Positive 50x50
- Site Boundary (2/28/2019)
- Feature A
- Backhoe Trenches
- Feature 4
- Feature B
- Feature C
- Proposed Ditch
- Bridge Rip Rap Boundary
- Excavation Area

Datum: NAD 83
Projection: UTM
Zone: 15
Units: Meters

0 25 50 0 5 10
Feet Meters



ATKINS

SITE 41WM1398 MAP CORRIDOR C SH 29 BYPASS PROJECT WILLIAMSON COUNTY, TEXAS

NOT FOR PUBLIC DISCLOSURE

Prepared By: Atkins/VORO5913

Scale: 1:600

Job No.: 100054924

Date: Feb 17, 2022

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Williamson County Corridor C SH 29 Bypass
Data Recovery Excavations for Site 41WM1398 - Phase 1: Field Excavations and Interim Reporting
Attachments D & E: Schedule & Fee Estimate
May 10, 2022



Attachment D - Work Schedule

Phase 1 Schedule	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23
Mobilization																
Trenching																
Hand Excavations																
Geoarchaeological/Geomorphological Analysis																
Artifact Collection & Initial Laboratory Analysis																
Interim Reporting																
Client & Agency Review, Revisions																
Interim Construction Permit (milestone)																

Attachment E - Fee Schedule

Labor

Staff	Position	Billing Rate	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Hours	Fee
Chris Allen	Sr. Environmental Planner	\$218	10	10	5	5	5	5	5	5	5	5	5	5	5	5	10	10	100	\$21,800
Katherine Turner-Pearson	Sr. Environmental Specialist	\$159	40	40	60	160	160	80	80	80	40	40	160	160	20	20	20	20	1180	\$187,620
Krista McClanahan	Environmental Specialist	\$130	50	50	60	70	70	70	60	60	40	30	30	30	20	20	20	20	700	\$91,000
Kelly Russell	Sr. Environmental Specialist	\$159	10	10	40	30	20	20	20	20	20	20	20	20	40	20	20	20	350	\$55,650
Russ Shortes	Environmental Specialist	\$130	40	40	80	160	160	160	160	160	40	40	40	40					1120	\$145,600
Sarah Bodah	Jr. Environmental Specialist	\$109			50	50	50	50	40	40	40	40							360	\$39,240
Ben Lee	Jr. Environmental Specialist	\$109	40	40	80	160	160	160	160	160	40	40	40	40					1120	\$122,080
Meg Renault-Varian	Jr. Environmental Specialist	\$109				160	160	160	160	160									800	\$87,200
TBD	Jr. Environmental Specialist	\$109				160	160	160	160	160									800	\$87,200
Myron Friedel	GIS Analyst	\$92		20	2	2	2	2	2	2	2	2	20	20					76	\$6,992
Amanda Boyd	Admin/Clerical	\$84											20	20		20	20		80	\$6,720
Phase 1 Labor Total																			\$851,102	
Phase 1 Expenses																			\$69,142	
Phase 1 Total																			\$920,244	

Expenses

Expense	Rate/unit	Quantity	Unit	Total
Hotel	\$130.00	75	nights	\$9,750.00
Truck Rate (2 trucks)	\$51.00	185	days	\$9,435.00
Trimble GPS	\$115.20	10	unit	\$1,152.00
TDS (Total Station)	\$1,700	6	months	\$10,200
Supplies	\$15	110	supply	\$1,650
Backhoe Operator	\$1,505	10	days	\$15,050
Meals	\$55	75	unit	\$4,125
Port-o-potty	\$180	6	months	\$1,080
Fencing	\$3,500	1	quote	\$3,500
C. Frederick	\$80	40	hours	\$3,200
Dirt Truck	\$125	80	hours	\$10,000
			Total	\$69,142