



Project Name: Forest North Drainage Improvements

**ATTACHMENT A
SUPPLEMENTAL NO. 2 TO
WORK AUTHORIZATION NO. 1**

This Work Authorization is made pursuant to the terms and conditions of the Agreement entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (*the "County"*) and K Friese & Associates, Inc. (*the "Engineer"*).

Part 1. The *Engineer* will provide the following engineering services: Revisions to the design, projects, analysis of existing detention pond, tree designations, project packages.

Part 2. The maximum amount payable for services under this Work Authorization without modification is hereby increased by \$82,267.00 for a maximum amount of \$642,276.00.

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

Part 4. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on December 31, 2017, unless extended by a Supplemental Work Authorization.

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

ATTACHMENT A (con't.)

Part 6. This Work Authorization is hereby accepted and acknowledged below.

ENGINEER:
K Friese & Associates, Inc.

COUNTY:
Williamson County, Texas

By: TCM.Os
Signature

By: _____
Signature

Thomas M. Owens, P.E.
Printed Name

Dan A. Gattis
Printed Name

Executive Vice President
Title

County Judge
Title

30 SEP 15
Date

Date

LIST OF EXHIBITS

Exhibit A - Services to be Provided by County

Exhibit B - Services to be Provided by Engineer

Exhibit C - Work Schedule

Exhibit D - Fee Schedule *(based on approved rates in PSA Exhibit II executed by
Commissioners Court action)*

OK
M 11/1/2015

Exhibit A - Services to be Provided by County

The County shall provide the following services:

1. The County shall provide timely review and decisions in response to the Engineer's request for information and/or required submittals and deliverables, in order for the Engineer to maintain the agreed-upon work schedule.
2. The County shall obtain all necessary easements to maintain the agreed-upon work schedule.
3. The County shall coordinate all public meetings.

Exhibit B - Services to be Provided by Engineer

Introduction

The supplemental agreement includes changes to the scope of services and design alignments following the 30% design review.

1) Survey of the proposed project sites/alignments:

2) Design and Bid Phase Services

- a) Project Design Meetings – KFA will prepare for and attend meetings with County staff to review plan and specification submittals. Two additional 30% meetings have been budgeted for this task. Monthly progress meeting have been scheduled with the Commissioner for 12 months.
- b) Public Coordination – KFA will support the Public Involvement specialist with one on one project coordination.
- c) Drainage Design Report – KFA will prepare a drainage design summarizing the methodology and assumptions used to design the project. This task assumes revisions for the Woodvale Zone, miscellaneous revisions for other zones adding prioritization summaries of the zones.
- d) Design Plans – KFA will perform a redesign of the Woodvale Zone considering three scenarios in addition to the current 30% option. 90% and 100% PS&E plans will only be prepared for one option selected by the County.
 - i) Hydrologic Analysis: KFA will perform a revision to the drainage areas, the HEC-HMS hydrologic model, the drainage area map sheet, and the hydrologic summary sheet.
 - ii) Research:
 - (1) Research of the undeveloped property located at the discharge of the channel identified as Channel WD1-1. The undeveloped lot is a privately owned lot without current drainage easements. Drainage easement configurations and final project alignment will need to be discussed with the County. This scope does not assume analysis of the lot as a pond.
 - (2) Research and summarize the restrictive covenants and easements for the Forest North Subdivision Sections as possible from the Williamson County Clerk website.
 - (3) Research and summarize permitting for construction and maintenance activity within the Lake Creek Tributary 2 and Lake Creek.
 - (4) Mapping of property research and hydrologic and hydraulic analysis.
 - iii) KFA will prepare a tree tracking spreadsheet in Microsoft Excel format based on the 90% submittal.

Project Name: Forest North Drainage Improvements

- iv) KFA will perform a redesign of the Woodvale Zone considering three scenarios in addition to the current 30% option. 90% and 100% PS&E plans will only be prepared for one option selected by the County.
 - (1) Option 1 will consider sizing a structure along the current project alignment sized to convey the 100-year event in order to eliminate a surface channel above the storm sewer structure. The storm sewer may continue and extend across Springvale Street, Channel WD1-1, and the undeveloped lot to Lake Creek Tributary 2.
 - (2) Option 2 will consider sizing a structure along the Newberry Drive from Parkland Drive to Springvale Street sized to convey the 25-year event. The storm sewer would then tie to the existing Springvale Street culverts. This option assumes that the existing Channel WD2-2 would remain in place unmodified.
 - (3) Option 3 will consider either Option 1 or 2 alignment routed north on Springvale to discharge directly to the undeveloped lot rather than Channel WD1-1.
 - (4) Option 4 will consider moving the fence line along the Woodvale Channel easement and reconstructing the channel.
 - v) KFA will perform a redesign of the Sherbrooke Zone due to easement acquisition adjustments. Including the outlet near Sherebrooke and the Broadmeade storm sewer routing.
 - vi) KFA will perform a redesign of the Stillforest Zone including extension of the channel south on the west side of Stillforest, addition of a channel on the north side of Chatterton, addition of a channel on the north side of Tottenham Ct.
 - vii) KFA will perform a redesign of the Sherbourne Zone including the addition of an inlet and storm sewer lateral at the intersection of Broadmeade and Chester Forest.
 - viii) KFA will create a separate PS&E package including plans, technical specifications, cost estimate, SWPPP project book for the Bayswater Zone for bidding and contracting through the Road and Bridge Department.
 - ix) KFA will create a separate PS&E package include plans, technical specifications, cost estimate, SWPPP project book for the Anderson Mill Zone for bidding and contracting through the Road and Bridge Department.
 - x) KFA will permit the Anderson Mill Zone package through the City of Austin Watershed Protection and Development Department.
- e) Opinion of Probable Construction Cost – KFA will prepare and submit an engineer's opinion of probable construction cost in Microsoft Excel format for the revised 30% submittal. KFA will also prepare an engineer's opinion of
- i) KFA will prepare a revised 30% cost estimate for three additional options for the Woodvale Zone.
 - ii) KFA will prepare a revised cost estimates for the two Sherbrooke options.
 - iii) KFA will prepare and submit preliminary 25-year design concepts for 15 zones. KFA will prepare an engineer's opinion of probable construction cost in Microsoft Excel format for an estimated 25-year system conveyance capacity scenario. System design is not included in the scope item.

Project Name: Forest North Drainage Improvements

Exclusions

- 1) Utility conflict assessment and potential utility relocation design is not included in this scope.
- 2) Survey for easements.
- 3) The remaining planimetric survey budget is sufficient to cover this additional design scope of work.