



## ***INDIVIDUAL PROJECT ORDER (IPO) #14***

### ***FM 544 CORRIDOR MASTER DRAINAGE ANALYSIS***

***DATE PREPARED: April 14, 2025***

Describing a specific agreement between Kimley-Horn and Associates, Inc. (Consultant), and the Wylie Economic Development Corporation (Client) in accordance with the terms of the Master Agreement for Continuing Professional Services dated October 4, 2022, which is incorporated herein by reference.

#### ***Identification of Project:***

Kimley-Horn and Associates, Inc. ("Kimley-Horn", "KH" or "the Consultant") is pleased to submit this professional services agreement to the Wylie Economic Development Corporation ("WEDC" or "the Client") for providing professional civil engineering services to provide a conceptual drainage analysis for the East Meadow and 45-ac Tract.

#### ***Scope of Services:***

LS = Lump Sum Fee Type

HR = Projected Hourly Fee Type

#### **Task 1 – Topographic Survey**

**\$21,500 LS**

KH (through a sub-consultant) will obtain topographic survey data within the study area. The topographic survey data is to be used for design purposes only and will not be issued as a stand-alone survey document.

The survey will consist of survey points along the cross-sections at the 20 locations and survey points at the existing three culvert crossing locations based on a survey grid system tied to existing control points; observed (only if clearly visible from the surface) locations of existing water, sewer, storm drain, and franchised utility facility appurtenances. The City of Wylie datum will be used.

Existing survey data obtained as part of IPO #9 will be used to supplement the survey data obtained as part of this task. The extent of the additional survey proposed is shown in the image on the next page.

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## Task 2 – Conceptual 45-ac Tract Drainage Analysis

**\$46,000 LS**

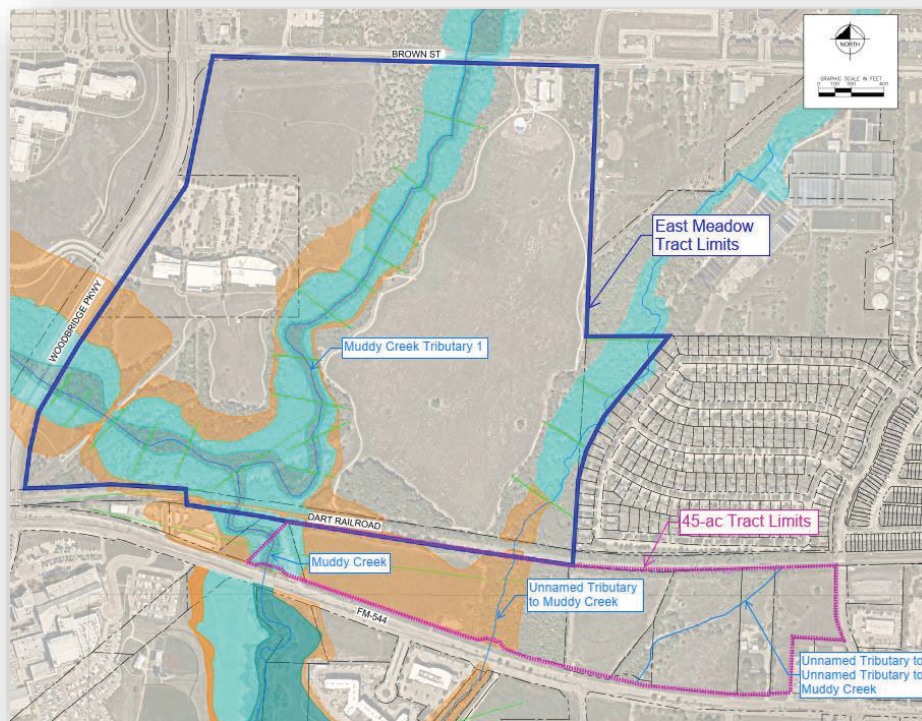
KH will prepare a drainage analysis of Muddy Creek, Muddy Creek Tributary 1, Unnamed Tributary to Muddy Creek (Unnamed Tributary), and the Unnamed Tributary to Unnamed Tributary to Muddy Creek (Unnamed Tributary to Unnamed Tributary) for the 45-ac Tract located on the north side of FM 544 and south of the Dart Railroad as shown in the image on the next page. The purpose of the analysis will be to delineate the 100-year existing and fully developed floodplain limits, assess conceptual reclamation limits, and determine detention requirements for land planning purposes.

KH will use the effective hydrologic and hydraulic models for Muddy Creek and Unnamed Tributary to Muddy Creek requested from FEMA in the General Engineer Task under IPO #1. KH assumes the models will be available, digital, and executable. KH will subdivide drainage areas for the subject property using the on-ground survey prepared in Task 1, aerial topography, and available record drawings. KH will evaluate onsite areas in pre-project and post-project conditions based on development of the subject properties. Offsite areas will be evaluated in existing conditions and fully developed conditions.

If proposed condition peak flows exceed existing condition rates, KH will determine preliminary detention volumes for up to three ponds to reduce the proposed flow rates to existing conditions. The required volume and approximate pond footprint will be used for the land planning efforts. Additional detail for outfall structures, grading, and spillways can be performed as an additional service with final design as needed.

KH will develop an existing condition hydraulic model for the subject reaches of Muddy Creek, Unnamed Tributary, and Unnamed Tributary to Unnamed Tributary using the on-ground survey prepared in Task 1 and supplemented with available aerial topography as needed. Cross sections will be spaced at approximately 300 ft intervals. The subject reaches for each creek will extend from approximately 300 feet downstream of FM 544 to approximately 300 feet upstream of the Dart Railroad.

KH will evaluate the potential for floodplain reclamation for the subject properties. KH will create a proposed condition hydraulic model for the subject reach by modifying the revised existing model using conceptual grading. KH will size one channel crossing as part of this task. KH will adjust the design up to two times to meet City and FEMA requirements regarding water surface elevations. KH will delineate the 100-year existing and fully developed floodplain for the subject reach. KH will submit a memo summarizing the drainage analysis and prepare a hydraulic workmap exhibit which includes the floodplain limits, conceptual reclamation limits, and detention pond footprints. This task does not include any submittals to the City or FEMA.



### Task 3 – Conceptual East Meadow Drainage Analysis

**\$37,500 LS**

KH will prepare a drainage analysis of Muddy Creek, Muddy Creek Tributary 1, Unnamed Tributary to Muddy Creek (Unnamed Tributary), and the Unnamed Tributary to Unnamed Tributary to Muddy Creek (Unnamed Tributary to Unnamed Tributary) for the East Meadow subject property located east of Country Club Road, south of Brown Street, and north of the Dart Railroad as shown in the image on the this page. The purpose of the analysis will be to delineate the 100-year existing and fully developed floodplain limits, assess conceptual reclamation limits, and determine detention requirements for land planning purposes.

KH will update the hydrologic analysis prepared under Task 2 for the East Meadow property. KH will subdivide drainage areas for the subject property using the on-ground survey prepared in Task 1, aerial topography, and available record drawings. KH will evaluate onsite areas in pre-project and post-project conditions based on development of the subject properties. Offsite areas will be evaluated in existing conditions and fully developed conditions.

If proposed condition peak flows exceed existing condition rates, KH will determine preliminary detention volumes for a pond to reduce the proposed flow rates to existing conditions. The required volume and approximate pond footprint will be used for the land planning efforts. Additional detail for outfall structures, grading, and spillways can be performed as an additional service with final design as needed.

KH will develop an existing condition hydraulic model for the subject reaches of Muddy Creek, Muddy Creek Tributary 1, and Unnamed Tributary using the on-ground survey prepared in Task 1 and supplemented with available aerial topography as needed. Cross sections will be spaced at approximately 300 ft intervals. The subject reaches will be as follows:

- Muddy Creek, from approximately 300 feet upstream of the Dart Railroad to the downstream face of Country Club Rd.
- Muddy Creek Tributary 1, from the confluence with Muddy Creek to downstream face of Brown St.
- Unnamed Tributary, from approximately 300 feet upstream of the Dart Railroad to approximately 1,700 ft upstream of the Dart Railroad.

KH will evaluate the potential for floodplain reclamation for the subject property. KH will create a proposed condition hydraulic model for the subject reaches by modifying the revised existing model using conceptual grading. KH will size up to three channel crossings as part of this task. KH will adjust the design up to two times to meet City and FEMA requirements regarding water surface elevations. KH will delineate the 100-year existing and fully developed floodplain for the subject reach. KH will submit a memo summarizing the drainage analysis and prepare a hydraulic workmap exhibit which includes the floodplain limits, conceptual reclamation limits, and detention pond footprints. This task does not include any submittals to the City or FEMA.

#### **Task 4 - Meetings/Project Coordination**

**\$10,000 HR**

We will prepare for and attend meetings with the WEDC staff and provide general project coordination. We have budgeted up to 40 hours of effort for this task.

***Additional Services:*** Services not specifically identified in the Scope of Services above shall be considered additional and shall be performed on an individual basis upon authorization by the WEDC. These include, but are not limited to, the items below.

- Geotechnical Investigation;
- Environmental Evaluation; and
- Submittals to the City or FEMA.





**Schedule:** Project to begin upon receipt of signed IPO #14. We will provide our services as expeditiously as practicable.

**Terms of compensation:** Kimley-Horn will perform the tasks identified in the Scope of Services for the fee type shown as follows:

LS = Lump Sum Fee Type  
HR = Projected Hourly Fee Type

<b>Task 1 – Topographic Survey</b>	<b>\$21,500 LS</b>
<b>Task 2 – Conceptual 45-ac Tract Drainage Analysis</b>	<b>\$46,000 LS</b>
<b>Task 3 – Conceptual East Meadow Drainage Analysis</b>	<b>\$37,500 LS</b>
<b>Task 4 – Meetings/Project Coordination</b>	<b>\$10,000 HR</b>
<b>Projected Total</b>	<b>\$115,000 LS</b>

Compensation for Services and Method of Payment shall be as referenced in the Master Agreement.

Invoices will be submitted with Lump Sum Tasks shown as a percentage of work completed and project Hourly Tasks shown as effort expended.

**ACCEPTED:**

WYLIE ECONOMIC DEVELOPMENT  
CORPORATION

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

KIMLEY-HORN AND ASSOCIATES, INC.

BY: Rachel Korns

TITLE: Associate

DATE: 4/14/2025