

**WORK AUTHORIZATION NO. 5**

**PROJECT: Traffic Signal Warrant Study – Pearson Ranch Road at Neenah Avenue**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated September 3, 2015 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Kimley-Horn and Associates (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is \$12,550.00.

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 August 31, 2017. The Engineering 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 18<sup>th</sup> day of July, 2017.

ENGINEER:

Kimley-Horn and Associates

By:

  
Signature

Brian Boecker

Printed Name

Vice President

Title

COUNTY:

Williamson County, Texas

By:

  
Signature

Don A Gattis

Printed Name

07-20-2017

Title

#### LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

**ATTACHMENT A**  
**Services to be Provided by the County**

**Locations:** Neenah Avenue at Pearson Ranch Road

**Project:** Traffic Signal Warrant Study

**SCOPE OF WORK OVERVIEW**

This project will study the need for a traffic signal at the intersection of Neenah Avenue at Pearson Ranch Road. The County is currently constructing Pearson Ranch Road to extend from its current terminus to RM 620. Daily traffic volumes from the CAMPO long range travel demand model will be used to determine projected traffic volumes once the roadway is complete. Traffic count data will be collected and a signal warrant analysis will be performed to determine if this intersection is projected to meet any of the traffic signal warrants contained in the Texas Manual on Uniform Traffic Control Devices.

**SERVICES TO BE PROVIDED BY THE COUNTY**

The County shall provide all information requested by K-H during the project, including but not limited to the following:

- Timely responses to requests for information or clarification; and
- Timely review of all submittals.
- Provide available copies of associated studies and coordination with ongoing related county projects.
- Provide accident data reports for the past three years through the TxDOT CRIS system.
- Provide decisions in a timely manner.
- Process payment to Engineer in a timely manner.

**ATTACHMENT B**  
**Services to be Provided by the Engineer**

**Locations:** Neenah Avenue at Pearson Ranch Road

**Project:** Traffic Signal Warrant Study

**SCOPE OF WORK OVERVIEW**

This project will study the need for a traffic signal at the intersection of Neenah Avenue at Pearson Ranch Road. The County is currently constructing Pearson Ranch Road to extend from its current terminus to RM 620. Daily traffic volumes from the CAMPO long range travel demand model will be used to determine projected traffic volumes once the roadway is complete. Traffic count data will be collected and a signal warrant analysis will be performed to determine if this intersection is projected to meet any of the traffic signal warrants contained in the Texas Manual on Uniform Traffic Control Devices.

**SERVICES TO BE PROVIDED BY THE ENGINEER**

**Task 1. Project Management**

Kimley-Horn and Associates, Inc. (KHA) will perform typical project management duties to meet the schedule discussed in subsequent sections. Project management duties will include coordination and communication with the Client, coordination with the data collection firm, and accounting activities related to the performance of the study.

**Task 2. Data Collection**

- 2.1 Intersection Data** – KHA will collect existing lane geometries, traffic control, and speed limits, for the intersection listed above.
- 2.2 Photo Log** – KHA will photograph the approaches to each intersection for verification of field data.
- 2.3 Turning Movement Counts** – KHA will collect weekday peak period turning movement counts (TMCs) from 7 - 9 AM (morning peak), and 4 - 6 PM (afternoon peak). The two-hour counts will be refined into peak demand hours with calculated peak hour factors for each approach. In order to develop a directional distribution, peak hour TMCs will be collected at the following intersections:
  - Neenah / Parmer
  - Neenah / Great Oaks
  - Pearson Ranch / Avery Ranch
- 2.4 Daily Traffic Volumes** – KHA will collect 24-hour approach counts on each leg of the intersection approaches. KHA will also utilize the CAMPO long range travel demand model to determine an estimate of projected volumes once Pearson Ranch Road is constructed to RM 620. A 24-hour directional count will also be collected on Great Oaks Drive (south of Neenah) in 15 minute increments. (The Great Oaks counts will be used to develop an hourly model for converting projected daily volumes.)
- 2.5 Accident Data** – Historical accident data will be collected from the County for the latest three years available.

**Task 3. Apply Traffic Signal Warrant Criteria**

KHA will apply warrants from the Texas Manual on Uniform Traffic Control Devices (TMUTCD) to the traffic count and accident data.

KHA will determine the applicable traffic control device that is warranted at the study intersection.

**Task 4. Meetings**

KHA will attend project meetings with the County as required. For the purpose of this proposal, it is assumed that one (1) such meeting will be held.

KHA's involvement in any additional meetings will be billed on an hourly basis in accordance with the attached rate schedule.

**Task 5. Technical Memorandum**

KHA will prepare a technical memorandum detailing the results of the study and describing recommendations. Two (2) draft copies of the memorandum will be provided to the County for review.

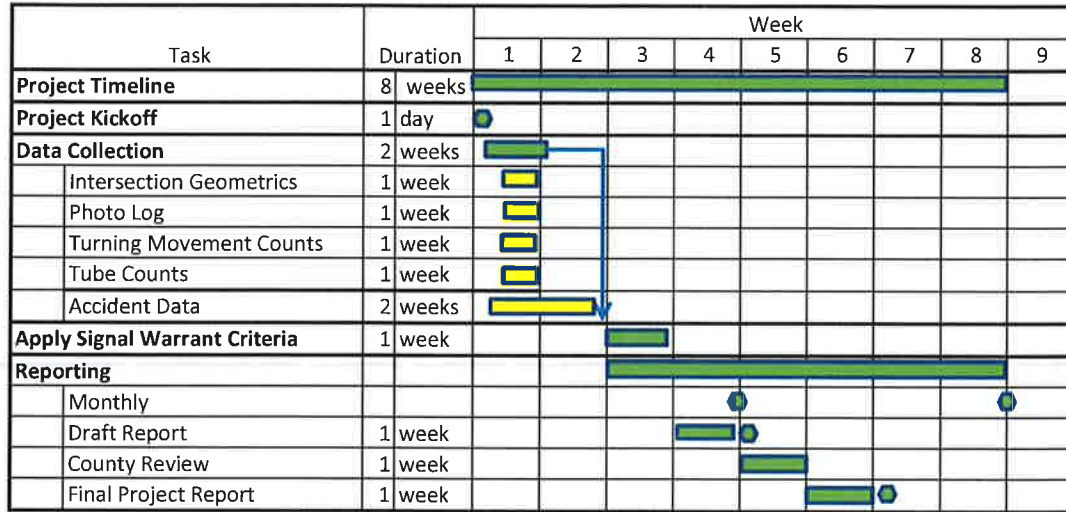
Within five (5) business days of receiving review comments, KHA will finalize the technical memorandum and provide four (4) copies to the County. All reports will be signed and sealed by an engineer licensed to practice in the State of Texas.

**Additional Services**

Any services not specifically provided for in the above scope will be considered additional services and can be performed at our then current hourly rates. Additional services we can provide include, but are not limited to, the following:

- Analyses of additional intersections;
- Operational analysis;
- PS&E services including, but not limited to, roadway design, signal design, and pavement design;
- Additional analyses or major re-works required resulting from County comments that are inconsistent with KHA's original direction from the County.

**Attachment C**  
**Pearson Ranch Road at Neenah Avenue**  
**WORK SCHEDULE**



**LEGEND:**

- Project Milestone
- Work Progress
- Task Progress

**WORK AUTHORIZATION 1**

**Attachment D**

Project Name: Traffic Signal Warrant Study  
 Project Description: Pearson Ranch Road at Neenah Avenue  
 Prepared By: Kimley-Horn and Associates, Inc.

Task #	KHA Task Name	Direct Labor (Person-Hours)				KHA Labor Total (hours)	KHA Labor Expense (\$)	Sub-Contractor and Expense (\$)
		Principal	Senior Transportation Engineer II	Engineer	Secretary / Clerical			
		\$240.00	\$215.00	145.00	75.00			
<b>1</b>	<b>Project Management</b>							
	Project Control and Management	1			1	2	315	
	Project Records and Files	1			1	2	315	
	Status Reports and Invoicing	1			1	2	315	
	<b>Task Total (Hours)</b>	3	0	0	3	6		
	<b>Task Total (Dollars)</b>	\$720	\$0	\$0	\$225		\$945	\$0
<b>2</b>	<b>Data Collection</b>							
	Tube Counts (4 approaches + Great Oaks)			2		2	290	\$750
	Turning Movement Counts (2 peak periods) x 4 Intersections			1		1	145	\$960
	CAMPO Model		2			2	430	
	Accident Data		1	2		3	505	
	Site Recon (Video / Photos / Drawings)		1	4		5	795	
	<b>Task Total (Hours)</b>	0	4	9	0	13		
	<b>Task Total (Dollars)</b>	\$0	\$860	\$1,305	\$0		\$2,165	\$1,710
<b>3</b>	<b>Warrant Analysis</b>							
	Signal Warrant Count Data - Hourly Model	1	2	6		9	1540	
	Signal Warrant Site Analysis	1	3			4	885	
	Signal Warrant Crash Data		1	2		3	505	
	<b>Task Total (Hours)</b>	2	6	8	0	16		
	<b>Task Total (Dollars)</b>	\$480	\$1,290	\$1,160	\$0		\$2,930	\$0
<b>4</b>	<b>Technical Memo Report</b>							
	Draft						0	
	- Report	1	8			9	1960	
	- Exhibits		1	4		5	795	
	Revisions		2	2		4	720	
	Final Report	1	2		2	5	820	
	<b>Task Total (Hours)</b>	2	13	6	2	23		
	<b>Task Total (Dollars)</b>	\$480	\$2,795	\$870	\$150		\$4,295	\$0
<b>5</b>	<b>Project Coordination Meetings</b>							
	Meetings	2				2	480	
	<b>Task Total (Hours)</b>	2	0	0	0	2		
	<b>Task Total (Dollars)</b>	\$480	\$0	\$0	\$0		\$480	\$0
	<b>TOTAL (Hours)</b>	9	23	23	5	60		
	<b>TOTAL (Fee)</b>	\$2,160	\$4,945	\$3,335	\$375		\$10,815	\$1,710

Project Summary					
Expenses					
Subconsultants Data Collection					\$1,710
Mileage	50.0 Miles X	\$0.500	per mile		\$25
11"x17" Plots	0.0 Plots X	\$0.20	per plot		\$0
8-1/2"x11" Plots	0.0 Plots X	\$0.10	per plot		\$0
<b>Total</b>					<b>\$1,735</b>
<b>K-H LABOR</b>					<b>\$10,815</b>
<b>GRAND TOTAL</b>					<b>\$12,550</b>