



# City of Pflugerville

## Legislation Text

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Discuss the innovative intersection options associated with the 2020 Transportation Bond Program Project: East Pecan Street Project.

On July 27, 2021, the City of Pflugerville approved and executed the Professional Services Agreement (PSA) with Kimley-Horn and Associates, Inc. (KHA) for the engineering design of East Pecan St. from Sun Light Near Way to Weiss Lane (4,200 LF). The Project includes preliminary design services for a six-lane urban roadway with a raised center median. Improvements include curb and gutter, underground storm facilities, a new bridge over State Highway (SH) 130, pedestrian and bicycle facilities, intersection improvements, and utility relocation. Right-of-Way (ROW) acquisition is also included.

This presentation is to provide an overview of the completed tasks by Kimley-Horn to explain need for additional professional engineering services in advance of the proposed regular agenda item 2022-0403 approval of such services related to the East Pecan Street project.

After receiving Notice-to-Proceed, Kimley-Horn proceeded with preliminary design and traffic modeling for the Project. The original scope of services assumed the intersection of E. Pecan Street and Weiss Lane/future Cameron Rd. would consist of a traditional, four-legged intersection. KHA performed a traffic analysis of the existing three-legged and proposed traditional intersection configuration. The results of the traffic analysis indicate an operational failure at the 20<sup>th</sup> year of service, which traffic congestion and delay would reduce the level of service, requiring more travel lanes to move traffic through the intersection. At the 20<sup>th</sup> year, the traffic flows exceed intersection capacity due to a high volume of left turns in the East to North and West to South directions. At the 20<sup>th</sup> year and beyond an innovative intersection could better accommodate the projected high traffic volumes.

The definition of innovative intersection, for the purposes of this presentation and project, is any of a series of at-grade or grade-separated intersection(s) that are significantly different from a conventional intersection in some way. Common differences include: a reduction or spreading of merging areas, restriction and/or rerouting of movements, and reduction of the complexity of traffic signal phasing. In an effort to provide future planning and consistency of design for the proposed construction area at the intersection, the Design Team considered need to perform traffic modeling to determine alternative types of innovative intersections prior to proceeding with development or completion of the preliminary study report.

The City requested that Kimley-Horn prepare a Professional Services Supplemental Agreement (PSSA) to perform innovative intersection modeling for the purposes of identifying the best type of innovative intersection that would be needed in the future. This analysis would allow the City to purchase Right-of-Way (ROW) now, which is primarily undeveloped land, for a future project to construct an innovative intersection when it is needed. Results of the innovative intersection design will be utilized to document necessary ROW and future needs as well describe coordination of

construction efforts between stages of development within the intersection. The E. Pecan Street project initial phase design proposed to construct a traditional intersection to serve in the first 20 years, however future ROW needs could be addressed in same design.

KHA's proposed amendment includes additional design scope to:

1. Perform additional traffic analysis for the E. Pecan St. and Weiss Lane/future Cameron Rd. intersection to determine if an innovative intersection would mitigate the intersection failure (this intersection would be phased as a future project);
2. Complete preliminary geometric design of the innovative intersection to identify the proposed intersection footprint and required ROW and present the innovative intersection on a preliminary exhibit roll plot;
3. Complete surveying services, prepare legal descriptions, and provide exhibit support to acquire necessary ROW required for the future innovative intersection;

Complete additional geotechnical testing and analysis to determine the remaining service life of the existing pavement to remain and provide pavement rehabilitation alternatives which was not included in the original scope of services.

#### **Prior City Council Action**

Pflugerville City Council called a November 3, 2020 bond election for three propositions totaling \$191.3 million at the August 11, 2020 meeting.

Pflugerville City Council approved a Professional Services Agreement with KHA totaling \$791,024.30 at the July 27, 2021 meeting.

#### **Supporting documents attached:**

Draft Presentation

#### **Recommended Action**

Presentation Item. No action to be taken.