

Agenda Information Sheet

DEPARTMENT: **Capital Projects**

CM/ ACM: **Mario Canizares**

Date: **January 9, 2018**

SUBJECT

Receive a report, hold a discussion, and give staff direction regarding the design and construction of LED street lighting along US Highway 380.

BACKGROUND

In recent months, both Council and various Citizens have expressed concern regarding the lack of street lighting along US Highway 380 and how this negatively impacts the safety of both drivers and pedestrians. At the request of the Assistant City Manager, Engineering Services conducted an analysis to determine the cost to install street lights along the corridor. The department reached out to various stakeholders, including TxDOT and Denton Municipal Electric, to gather the information needed to estimate a high level cost.

US Highway 380 is a primary arterial road that runs east to west through the city. The corridor consists of an urbanized section from I-35 to Loop 288 that has both commercial and residential areas. The corridor also has less urban sections from Loop 288 to the eastern city limit and from I-35 to the western city limit. The urbanized section from I-35 to Loop 288 has a larger need for the addition of street lighting than the less urban sections because of the greater amount of traffic and pedestrian volume in the area. However, the need for lighting will increase in the less urban sections as population growth moves into those areas and they become more urbanized. Because of this, they are included in the cost analysis below as part of option 2 as well as in Exhibit 2 attached.

The City currently uses high pressure sodium (HPS) fixtures for its street lights. However, many cities are moving toward light-emitting diode (LED) fixtures due to lower maintenance and electricity costs. The lighting market is moving toward LED fixtures as well and HPS fixtures are becoming harder to find and purchase. Because of this, the following analysis is based on the cost to install LED fixtures along the corridor.

COST ANALYSIS

1. Cost to install LED lighting from **I-35 to Loop 288** (4.97 miles in length)
 - a. Material/Install: \$2,019,107
 - b. Electricity/Maintenance: \$59,170.08/year
2. Cost to install LED lighting from **City limit to City limit** (12.83 miles long)
 - a. Material/Install: \$5,635,137
 - b. Electricity/Maintenance: \$154,248.72/year

RECOMMENDATION

Engineering Services is seeking direction from Council on continuing to explore the addition of lighting to the US 380 corridor. The recommended first step is to engage a consultant to conduct a feasibility and photometric study, which will determine the current lighting levels on the corridor. The study would provide options on the layout of the light fixtures based on current conditions and determine more refined project cost estimates. If the City Council concurs in moving the project forward then the staff would begin negotiating with a consultant on a price (estimated at \$75,000) and timing to conduct the study.

ESTIMATED SCHEDULE OF PROJECT

City staff select/hire consultant:	Jan. /Feb 2018
Consultant begins study:	Late Feb. /Early Mar. 2018
City staff presents results to City Council:	June 2018

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

Informal Staff Report 2017-089 provided to Council on December 15, 2017

STRATEGIC PLAN RELATIONSHIP

The City of Denton's Strategic Plan is an action-oriented road map that will help the City achieve its vision. The foundation for the plan is the five long-term Key Focus Areas (KFA): Organizational Excellence; Public Infrastructure; Economic Development; Safe, Livable, and Family-Friendly Community; and Sustainability and Environmental Stewardship. While individual items may support multiple KFAs, this specific City Council agenda item contributes most directly to the following KFA and goal:

Related Key Focus Area: **Public Infrastructure**
Related Goal: **4.1 Enhance public safety in the community**

EXHIBITS

1. Agenda Information Sheet
2. Supplemental Cost Analysis
3. Presentation for City Council

Respectfully submitted:
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