16-922

TITLE: Discuss and Provide Direction on Potential Improvements to Address Flooding in the Northern Part of Downtown as Determined by the University Drive Area Drainage Analysis

COUNCIL GOAL: Enhance the Quality of Life in McKinney

MEETING DATE: September 19, 2016

DEPARTMENT: Development Services / Engineering

CONTACT: Mark Hines, PE, Director of Engineering

RECOMMENDED CITY COUNCIL ACTION:

- Approval of the recommended option.

ITEM SUMMARY:

- In 2015, the City hired Freese and Nichols, Inc., to perform a flooding study of the northern part of downtown. The study shows flooding of varying degrees during different storm events. Several alternatives are presented as potential mitigation options.
- Staff recommends an option called the 25-year Structure Alternative. It is intended to protect all structures within the project area from flooding for all storms up to the 25-year storm. It will cost approximately $1,389,000 to implement.

BACKGROUND INFORMATION:

- As rainfall patterns have shifted in recent years from drought to an unusually wet period, flooding has increased in downtown McKinney.
- In both 2015 and 2016, residents have complained about water inundating streets, yards, and, in some cases, homes and businesses. Several complaints were received from the northern part of downtown.
- In response, the City hired Freese and Nichols, Inc., to investigate the source of flooding in this area, which is generally bound by University Drive, Hall Street, N. Morris Street, and Tennessee Street.

- The study shows varying degrees of flooding during different storm events and presents different alternatives to address them.
- Because among the viable alternatives it provides the most benefit for the cost, staff recommends the 25-year Structure Alternative, which will cost approximately $1,389,000 to implement.
- While it does not protect all areas from all potential flooding, it does provide protection from most storms and lessens flooding from the most severe storms. In particular, it would have prevented the flooding of structures from the storms of 2015 and the first part of 2016.
- As funding allows, additional improvements could always be added in the future.

FINANCIAL SUMMARY:

- Viable options vary in cost from $1,041,000 to $3,021,000. The recommended alternative will cost approximately $1,389,000 to implement.
- Once a particular alternative is selected, funding will be determined in light of other drainage projects in the Capital Improvement Program.

BOARD OR COMMISSION RECOMMENDATION:

- N/A

SUPPORTING MATERIALS:

East Side Flooding Study Report
Presentation