



### Project Background

Following the widespread flooding that was experienced during the storm events of June and July 2010, and April 2013, Christopher B. Burke Engineering, Ltd. (CBBEL) was hired to develop a comprehensive flood plan for the City of Elmhurst (City). As part of the comprehensive flood plan, thirteen (13) flood-prone areas throughout the City were studied to determine proposed drainage improvements to alleviate the flooding in those areas.

The most cost-effective solution identified to reduce flooding is the creation of flood storage in open spaces throughout the City. One of the open areas identified in the comprehensive flood plan involves the existing detention basins located at the intersection of York Street and I-290. Expanding the capacity of these basins would benefit several homes along Larch Avenue and Addison Avenue and also reduce the roadway flooding that occurs along York Street at I-290.

### Project Details

Creating additional flood storage in the existing detention basins located at the intersection of York Street and I-290, in conjunction with the construction of relief sewers, would significantly reduce the risk of flooding for homes along Larch Avenue and Addison Avenue. Additionally, the expansion of the flood storage area would reduce the roadway flooding that makes York Street impassable during severe storm events.

### Key Benefits and Facts

This project would provide flood-reduction benefits to 3 homes as well as reduce roadway flooding along York Street in a 100-year design storm event. Approximately 7 acre-feet of additional flood storage can be created in the existing detention basins at a conceptual cost of \$2.0 million (\$0.67 million for York St. only for 6 acre-feet); the construction timeline is estimated at approximately one year.

### Project Description

The existing detention basins located at the intersection of York Street and I-290 have an approximately 10-year capacity. For storm events that exceed a 10-year frequency, the detention basins will overflow, resulting in significant roadway flooding and road closures in this location.

The goal of this project is to improve the function of the existing drainage system by increasing both the capacity of the existing pipe system and the capacity of the existing detention basin. Conveyance improvements, in conjunction with the creation of additional flood storage volume, would provide valuable flood-reductions benefits to the Larch Avenue and York Street flood problem areas. Relief sewers would be constructed that extend from the low areas of Larch Avenue and Addison Avenue to the detention basins located at York Street/I-290. An additional 7 acre-feet of flood storage can be provided in these detention basins through deeper excavation and modifications to the side slopes of the facilities. The expansion in storage volume will mitigate the flooding experienced along Larch Avenue and Addison Avenue, and will also reduce the roadway flooding that occurs along York Street/I-290. The proposed project will provide a 100-year level of flood protection for both of these study areas.



Conceptual Solution

Larch Avenue Study Area  
XP-SWMM Simulated 100-Year Inundation Area



Inundation Areas

York/I-290 Study Area  
XP-SWMM Simulated 100-Year Inundation Area

