JCB & Miami Sewer Separation & Adams Park Wetlands Improvement Project

City of Omaha CSO

SITE AND PROJECT SUMMARY

The John Creighton Boulevard (JCB) Stormwater Conveyance Sewer Project is part of the City of Omaha's Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP). The Project consists of sewer separation and wetlands designed to reduce CSO volume, sewer backups, improve water quality, and provide a neighborhood amenity. The sewer separation project area encompasses the JCB and Miami subareas and consists of 273 acres of predominantly residential property generally bounded by Hamilton Street on the south, Maple Street on the north, 33rd Street on the east and 38th Street on the west. During sewer separation in 2015 and 2016, approximately 27,000 linear feet of storm sewer was constructed, consisting of pipes as large as 84 inches in diameter to as small as 15 inches in diameter. The new storm sewers connect with a previously-separated area of 50-acres, and the resulting 323 acre separated area then drains into the constructed wetlands area in Adams Park.

The Adams Park wetlands and detention area is designed to provide the maximum practical stormwater storage to reduce the peak flowrate in the downstream sewer system. The wetlands consist of an area covering approximately 14 acres, separated by an embankment for a future park road. A DNR permitted dam with emergency spillway was constructed on the north side of the park, near Bedford Avenue, to provide detention volume of up to approximately 77 acre-feet, which will detain the 100-year storm event, while reducing peak flows substantially. Models indicate that the peak flowrate in a 2-year storm event is reduced by over 90%, while a 10-year storm will see a peak flowrate reduction of approximately 80%, and a 100-year storm will see will see a peak flowrate of approximately 65%. In addition to the impressive peak flowrate reduction, the wetland facility is designed to provide water quality benefits and community enhancement elements.

Construction of the project in Adams Park began on September 3, 2014 and was completed in June 2016. Sewer separation work began in March 2015 and was completed in early 2017. There was a separate construction contract for the installation of trees, wetland plantings and landscape features which included a 2-year maintenance agreement to ensure the plantings were well-established before City assumed ownership. In the Spring of 2018, maintenance of the overall facility was transferred to the City of Omaha. A coordinated effort between several divisions of Public Works (Sewer Maintenance, Environmental Quality Control, and Design Division), as well as Parks, Recreation, and Public Property and several outside consultants and contractors is being implemented to ensure that the Adams Park wetland and stormwater storage facility is well-maintained and continues to provide benefits to the sewer system and the community for years to come.

PROJECT DETAILS

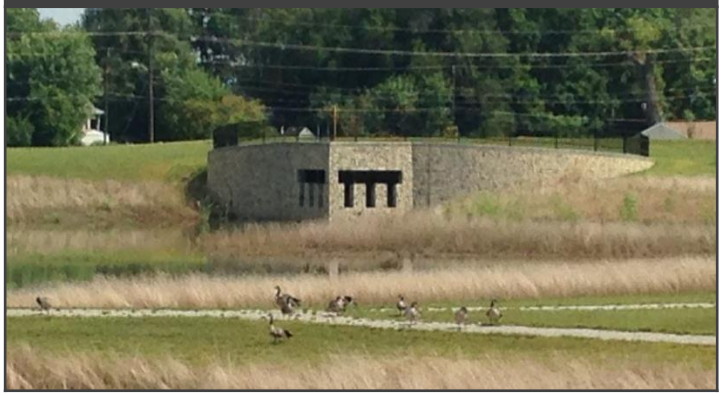
DESCRIPTION	DESIGN ASSUMPTIONS
Volume of Detention Basin	77 acre-feet
Area of constructed wetlands	14 acres
Length of Storm Sewer	6"-84" pipe; 27,000 linear feet

DESIGNED BY	CONSTRUCTED BY
CDM Smith Inc. Vireo	Hawkins Construction Company & Next Phase Environmental Inc. (Landscape)

COSTS	
Design	$3,320,445.00
Construction Management	$2,383,939.00
Construction (Hawkins)	$19,995,405.00
Landscaping (Next Phase)	$598,137.00
Total	$26,297,926.00

SITE LOCATION – 3121 Bedford Ave

INLET STRUCTURE



OUTLET INTO PARK

PARK CROSSING

EMERGENCY SPILLWAY

PROJECT LAYOUT