



# Omaha Vehicle Impound Facility Bioswale

7809 F Street, Omaha, NE

City of Omaha Stormwater Program

## SITE AND PROJECT SUMMARY

The City of Omaha Vehicle Impound Facility provides storage and disposal of vehicles towed by the Omaha Police Department and the Douglas County Sheriff's Department. Located at 7809 F Street, the Omaha Vehicle Impound Facility sits on roughly 16.25 acres adjacent to the Big Papillion Creek.

The goal of this project was to remove existing stone rubble and rip-rap within a hard to maintain, established drainage swale on the south end of the property and convert it to a bioswale. Three drop structures and a concrete reinforcement mat, Fleximat, installed below each structure, were incorporated into the bioswale to manage the overall velocity of stormwater runoff and prevent erosion. These features also create pooling areas allowing sediment to settle out and increase infiltration into the surrounding soil. The newly designed vegetative swale was seeded with a grass mix incorporating native and wet tolerant plant species that include Fox Sedge, Switchgrass, Western Wheatgrass, Big Bluestem, Prairie Cordgrass, Smooth Brome, etc. This vegetation will help with bank stabilization, sediment trapping, and reduction in erosion and stormwater flow velocity.

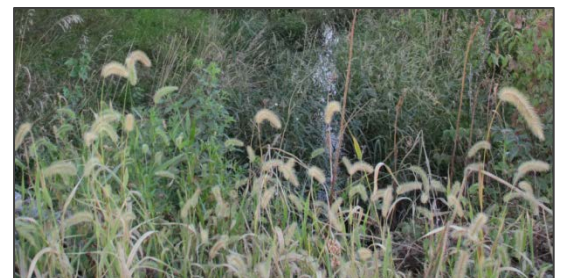
In addition to the installation of a vegetated swale, a hydrodynamic separator was installed just "upstream"

of the bioswale to capture sediment from an aggregate parking lot and prevent flow from eroding an adjacent property. Hydrodynamic separators are used to reduce sediment concentrations and other pollutants from stormwater by creating a vortex motion to runoff flow, causing pollutant particles to settle out of the water and into a storage area that can be



## PROJECT DETAILS

	VEGETATED SWALE
Project Footprint	9, 300 ft <sup>2</sup>
Length of Channel	295 ft
Mean Width of Channel	12 ft
Pre-Treatment System	Hydrodynamic Separator
Contributing Area	2.5 acres
Percent Impervious (%)	99%
Predominant Land Use	Industrial & Commercial
Predominant Soil Types	Silty clay loam; <b>Parent material:</b> disturbed fine-silty loess

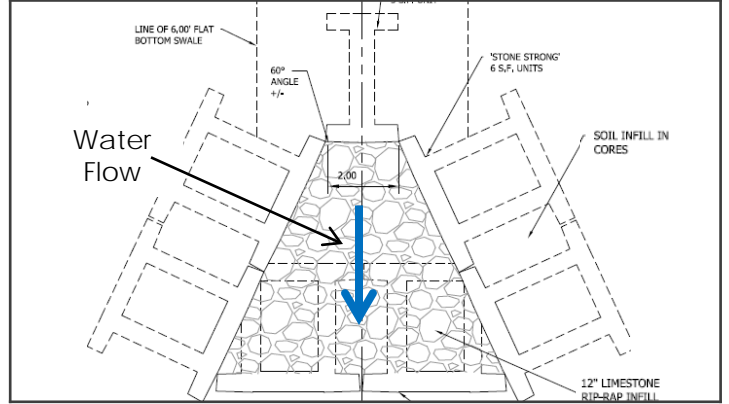


DESIGNED BY	CONSTRUCTED BY	MAINTENANCE BY
VIERO, RW Engineering & Survey	Midwest Excavating	City of Omaha Stormwater Program & Sewer Maintenance

## SITE LOCATION – 7809 F Street



## DROP STRUCTURE VIEW



## PHOTOS



## PROJECT LAYOUT AND SIGNAGE

