



UNO Welcome Center Bioretention Garden

An interactive landscape to engage and draw people in

City of Omaha Stormwater Program & University of Nebraska - Omaha

SITE AND PROJECT SUMMARY

This project was a collaboration between the City of Omaha Stormwater Program, the University of Nebraska at Omaha, and the Nebraska Statewide Arboretum and their Waterwise Grant Program. The goal for the project was to provide a unique demonstration project that could be utilized as a teaching tool and an amenity to the UNO Campus.

The UNO Bioretention Garden functions as a green infrastructure practice that captures runoff from the surrounding landscape and roof after each storm event and infiltrates the runoff into the soil. It is similar to a rain garden, but since it handles large amounts of runoff, it was designed with a valved underdrain that ensures drainage within 24 hours. Over time, the plants will establish deep root systems that will help increase infiltration into the soil and ultimately

eliminate excess runoff to the adjacent parking lot, except during extreme rain events.

The plants have been selected for their adaptability to local climate and soil conditions, and most are native to the region. They are placed in the garden based upon their seasonal beauty, height, complementary combinations with adjacent plants, and relative tolerance for wet soils (frequent inundation in the garden bottom, never inundated outside of the garden ponding areas).

The garden is also designed to be an inviting "front door" to the UNO Welcome Center and it provides a comfortable campus space for students, faculty/staff, and campus visitors.



Button Bush

PROJECT DETAILS

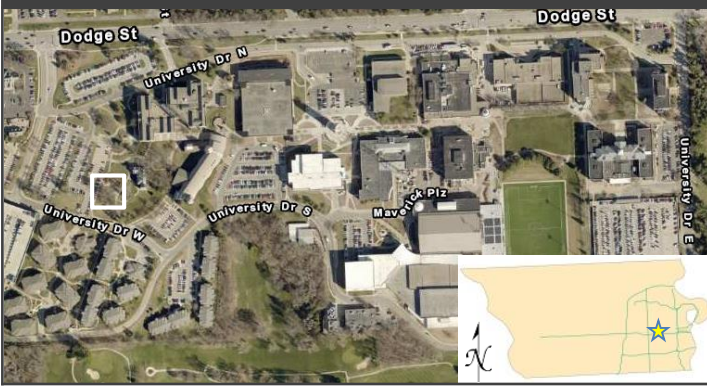
	BIORETENTION A (NORTH)	BIORETENTION B (SOUTH)
System Footprint	625 ft ²	720 ft ²
Underdrain	4" PVC, no upturned elbow	4" PVC, upturned elbow
Pre-Treatment System	None	None
Outlet Control	2" Polyball Valve	2" Polyball Valve
Contributing Area	10,160 ft ²	14,110 ft ²
Percent Impervious (%)	44%	29%
Predominant Soil Types	Silty clay loam; Parent material: disturbed fine-silty loess	Silty clay loam; Parent material: disturbed fine-silty loess

COSTS	
Design	\$13,301.50
Construction	\$46,500.00
Plants	\$4,449.85
Total	\$64,251.35

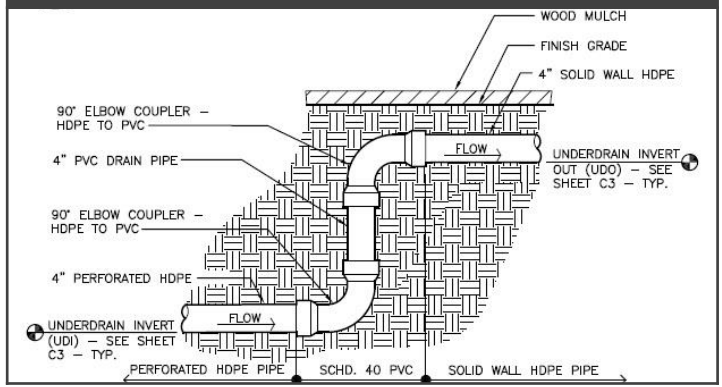
MONITORING	METHOD
Rainfall	Rain Gauge – Durham Science Building
Soil Temperature	Temperature Probes – 6" to 30" deep
Soil Moisture	Moisture Probes – 6" to 30" deep
Plant Assessment	Time Lapse Cameras – 2017

DESIGNED BY	PLANTING PLAN BY	CONSTRUCTED BY	MONITORING/ ASSESSMENT BY	MAINTENANCE BY
John Royster & Ryan Bentley, Big Muddy Workshop Inc.	Steve Rodie, UNO	Dostal's Construction	City of Omaha/ UNO	University of Nebraska - Omaha

SITE LOCATION – 6001 Dodge St



UPTURNED ELBOW DETAIL



PHOTOS



PROJECT LAYOUT

