The Preserve

at Edgewood GC | Fargo, North Dakota

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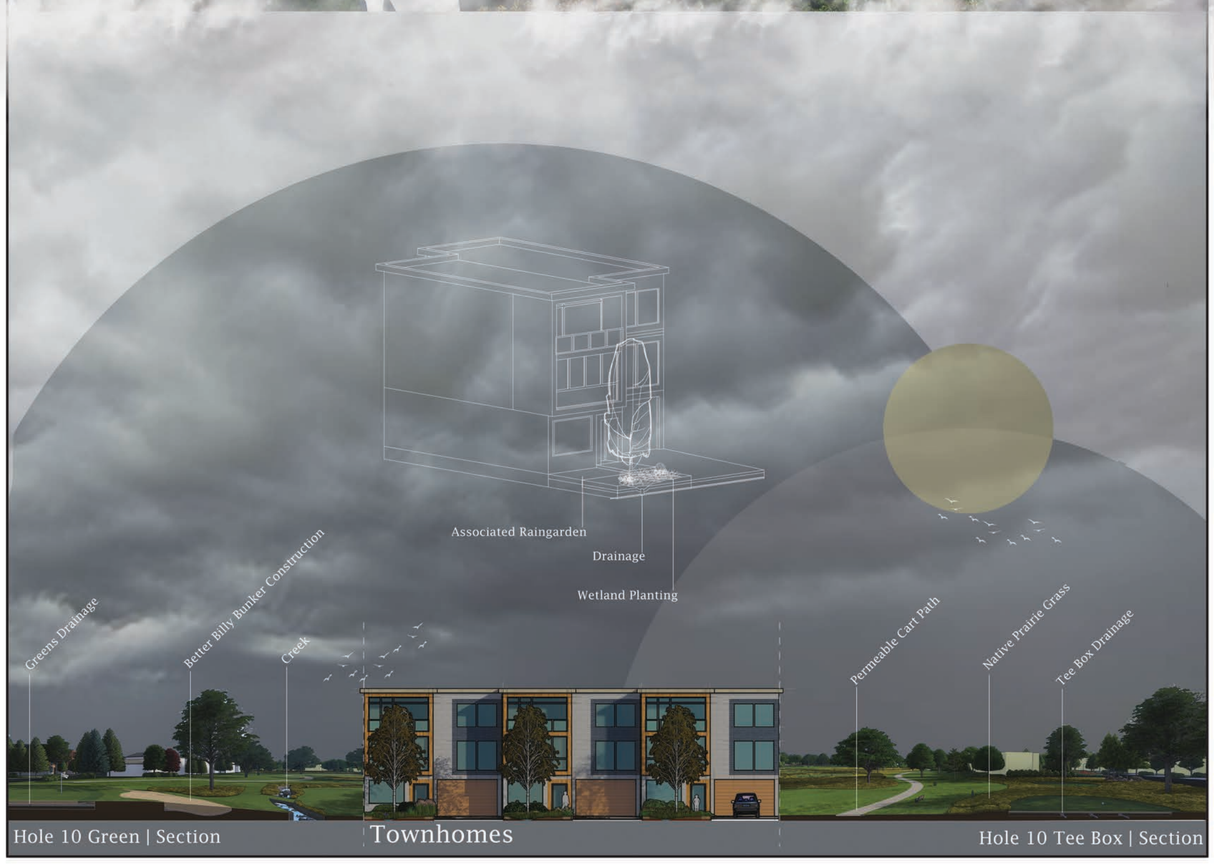


The Preserve at Edgewood, GC

Improving urban stormwater management by implementing the golf course experience through a residential setting

The design elements exemplifiied throughtout this project share the common goal of better stormwater mitigation practices through the urban condition by improving excess runoff capture and distribution.

Project Goals

- Improve Stormwater Capture & Distribution
-Provide Housing Diversity
-Uphold the Traditional Golf Experience of Edgewood GC

The interactive wetland park displays the distribution of stormwater runoff through the urban condition by the use of commonly occuring surfaces with varying permeability. The experience of featured elements are meant to change prior to rain events.

Hole 10 Green Complex

Greens will be elevated and constructed with subsurfaced drainage. Excess storm-water and irrigation water will be drained into either the nearest pond, creek or drainage basin to be further distributed to retention area.

Bunkers will be constructed with a highly permeable Better Bill Bunker liner to allow runoff to pass through into perforated pipe to be carried to the nearest watershed collection.

Turf Selection | Creeping Bentgrass

Interactive Wetland Community Park

This community park will functionally operate as a destination for the surrounding residents as well as the main watershed destination for excess runoff from the bordering homes. The planting selections will consist of woody plants and grasses with high flood tolerancy meant to absorb runoff. The elevated wood platform will allow for increased runoff storage volume beneath the surface. Hard-scaped elements will display varying rates of watershed as some areas, like the rock garden, will be constructed with the purpose of releasing stormwater at a slow rate to pool excess water and create a different user experience.

Natural Flood Tolerant Planting
Elevated Platform
Pitched Lawn
Interactive Rock Garden

Hole 10 Tee Boxes

Tee boxes will be elevated and built with subsurfaced drainage that carries stormwater and excess irrigation water to the nearest retention pond to be stored for regular irrigation of the golf course. Native prairie grass plantings will encompass the tees to filter runoff as it is distributed to ponds.

Turf Selection | Creeping Bentgrass

Site Context:

The proposed 40 acre site is bordered by the Red River, Fargo Parks operated Edgewood Golf Course, and an existing neighborhood to the south and west of the site in North Fargo, ND. The neighborhoods of northern Fargo are some of the oldest in the city and are well established with tree lined boulevards, neighborhood schools and parks, historic homes and 100 year old golf courses including Edgewood GC.

Project Elements:

This design includes 39 single-family homes, 17 Townhomes, a community park, and 2 relocated golf holes from Edgewood GC.

Proximity to the Red River allows for a consistent irrigation schedule for Edgewood but golf holes susceptible to regular flooding demand constant renovation and regrowth of turf. The proposed design will relocate holes 6 & 7 and implement them into the proposed developement layout as new golf holes 10 & 11.

A variety of housing opportunities supports the growing diversity of the Fargo-Moorhead area and upholds the close community characteristics of the established northern Fargo neighborhoods

1. Single-Family Homes
2. Townhomes
3. Interactive Wetland Park
4. Tee Boxes
5. Retention Ponds
6. Hole #10
7. Hole #11

Stormwater Runoff Storage Results

Results are calculated for a 25 year storm event with a duration of 60 minutes.

Current Neighborhood Conditions

Max stormwater storage requirements | **121,965 cubic feet**

The Preserve **excess runoff results -**

Time of concentration | 27 minutes

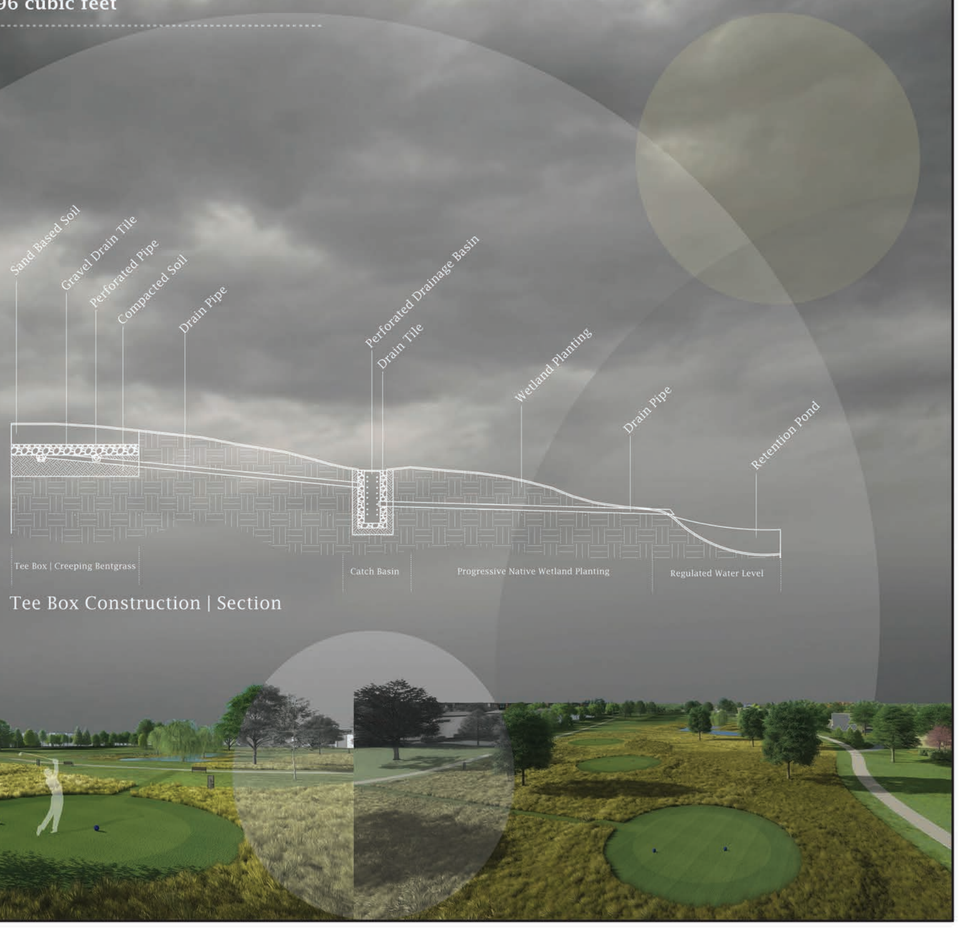
Max inflow rate | 42.4 cubic feet / second

Max outflow rate | 38.54 cubic feet / second

Max stormwater storage requirements | **13,896 cubic feet**

Design Successes |

The increased ratio of softscape, design elements constructed to store excess runoff and a landscape shaped to quickly distribute stormwater to retention basins successfully addresses the current poor conditions of the stormwater system. With the design plans of ***The Preserve*** excess stormwater is contained on the 40 acre site and can be utilized for golf course irrigation use and maintenance of the residential landscape



Tee Box Construction | Section