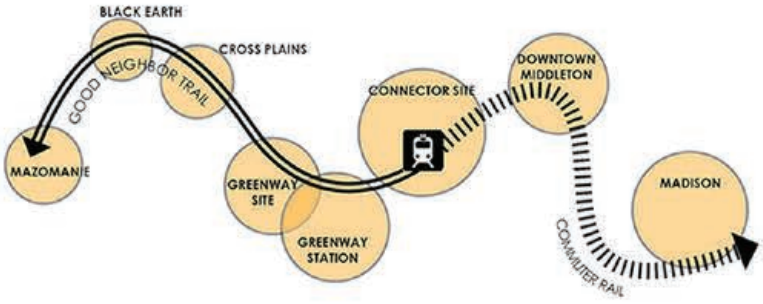
GOOD NEIGHBOR TRAIL

TRANSIT-ORIENTED DESIGN & PLANNING

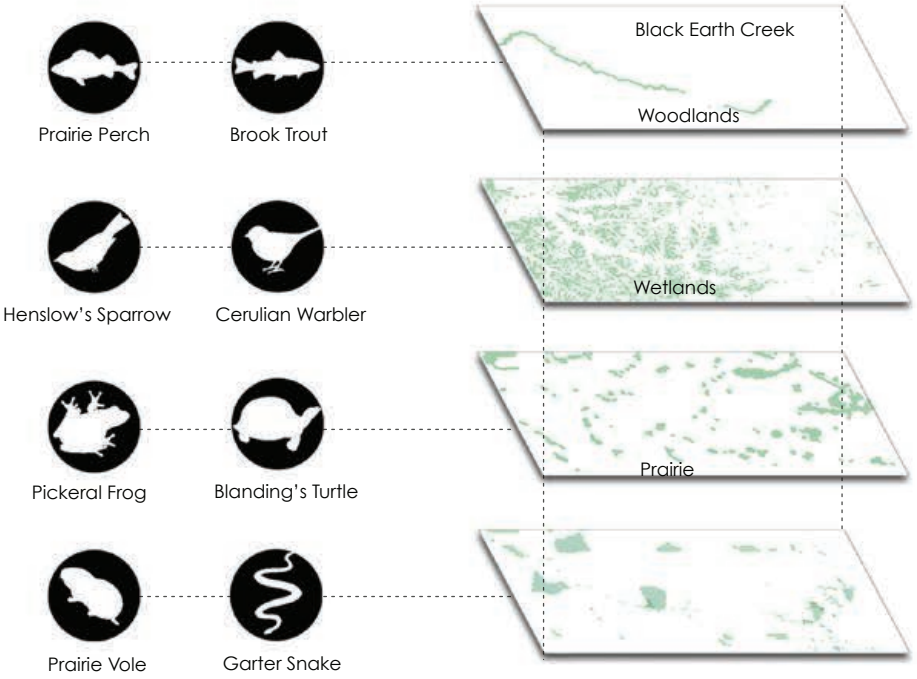
Middleton, WI

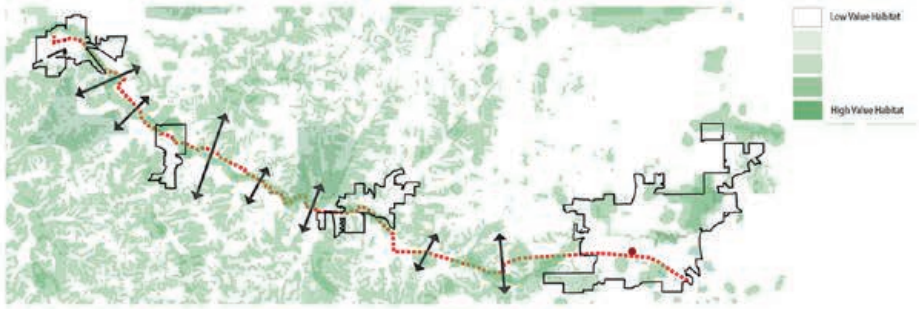
AFFILIATION: University of Wisconsin, City of Middleton
CLIENT: City of Middleton
CONTRIBUTION: Individual Capstone Project
MEDIA: GIS, Illustrator, Photoshop, AutoCAD, SketchUp



This Senior Capstone Project examines the Good Neighbor Trail (GNT), a proposed multi-use trail that extends through western Dane County, and examins design solutions at varying scales. The project includes regional analysis, master planning, site design and technical site details. The regional aspect of this project focuses on enhancing connectiveity throughout the corridor in terms of transportation systems and landscape ecology. Proposals also emphasize enhancement of recreational opportunities by creating nodes of interest along the proposed corridor.

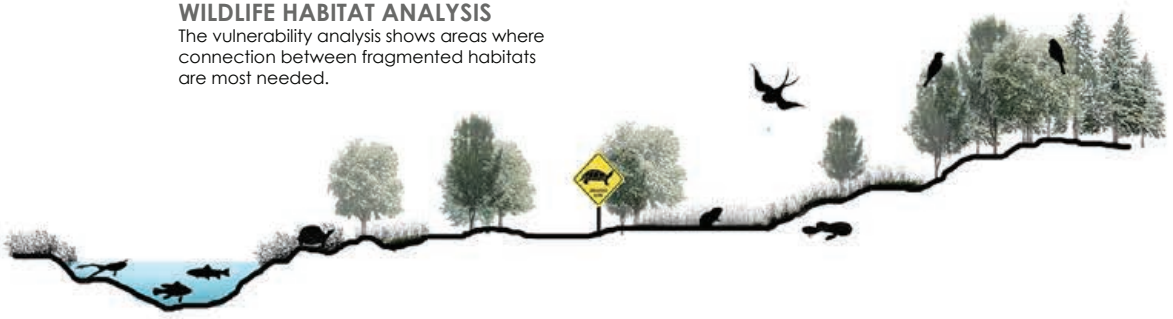
REGIONAL ANALYSIS



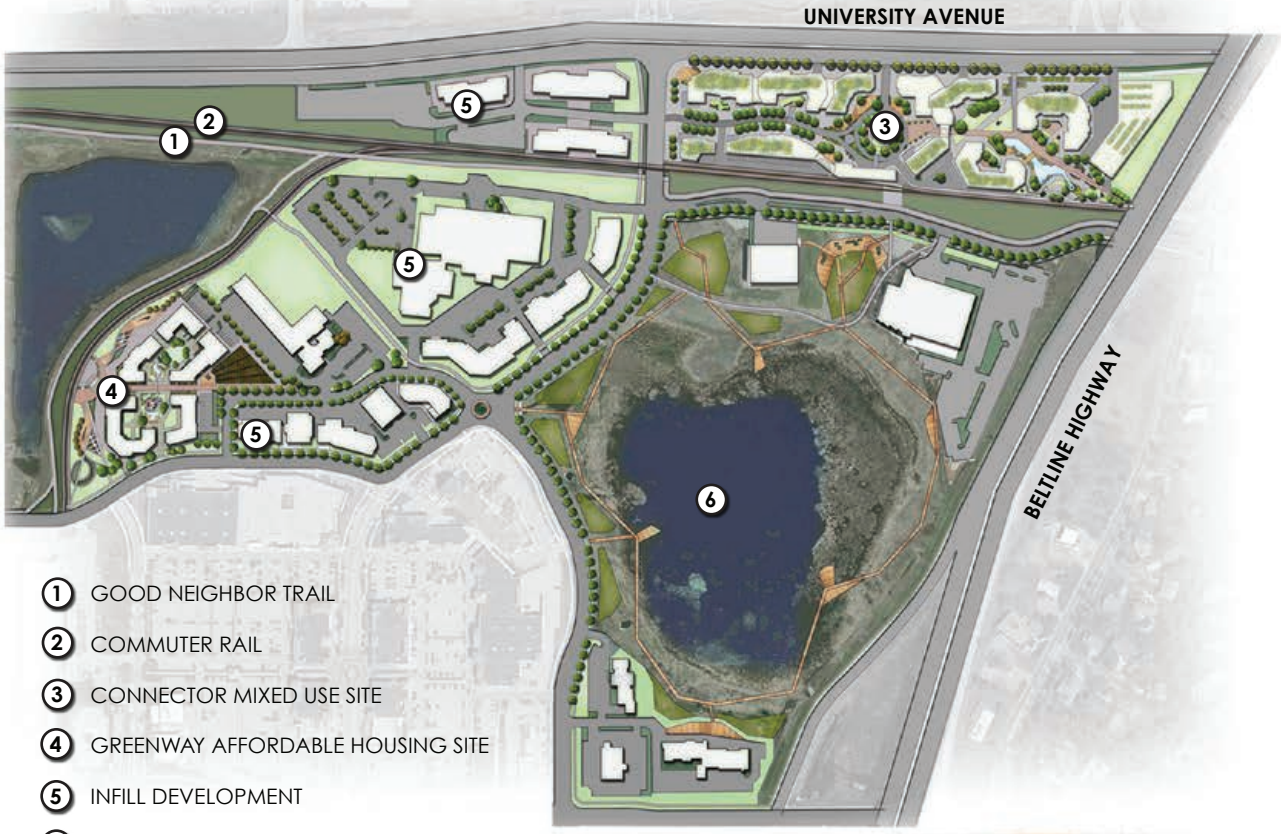


WILDLIFE HABITAT ANALYSIS

The vulnerability analysis shows areas where connection between fragmented habitats are most needed.



MASTER PLAN

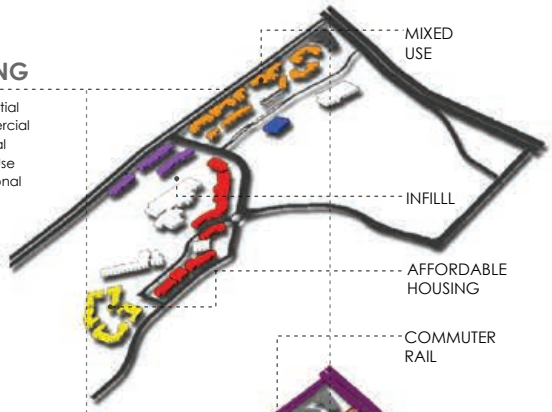


1. GOOD NEIGHBOR TRAIL
2. COMMUTER RAIL
3. CONNECTOR MIXED USE SITE
4. GREENWAY AFFORDABLE HOUSING SITE
5. INFILL DEVELOPMENT
6. ESSER'S POND STORMWATER PARK

The master plan site of the Capstone Project is located along the Good Neighbor Trail in the City of Middleton, at the intersection of two major vehicular routes, University Avenue and the Beltlines Highway. The master plan introduces infill and new mixed use developments and emphasizes sustainable and active living as well as transit oriented development. The plan consists of the design of two sites, the Connector site and the Greenway site, which are connected by both the Good Neighbor Trail and a proposed commuter rail corridor that both serve to enhance connections to the greater region. Other features include a commuter rail station, a park & ride, an extensive stormwater collection system, a stormwater park, community garden spaces and a sculpture park.

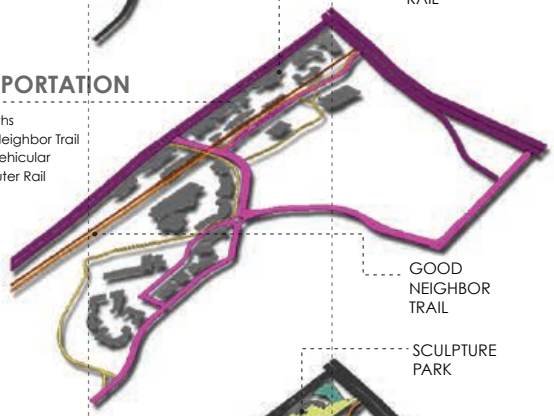
ZONING

- Residential
- Commercial
- Industrial
- Mixed Use
- Institutional
- Public



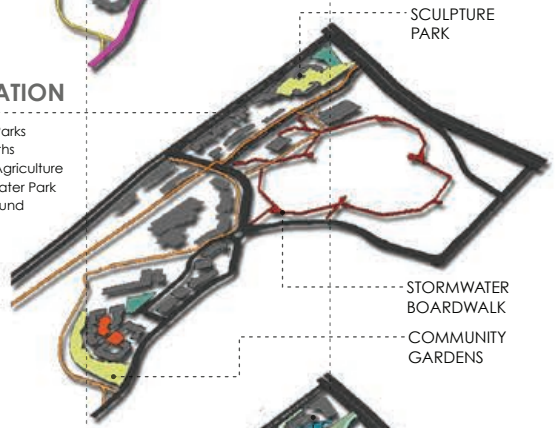
TRANSPORTATION

- Bike Paths
- Good Neighbor Trail
- Major Vehicular
- Commuter Rail



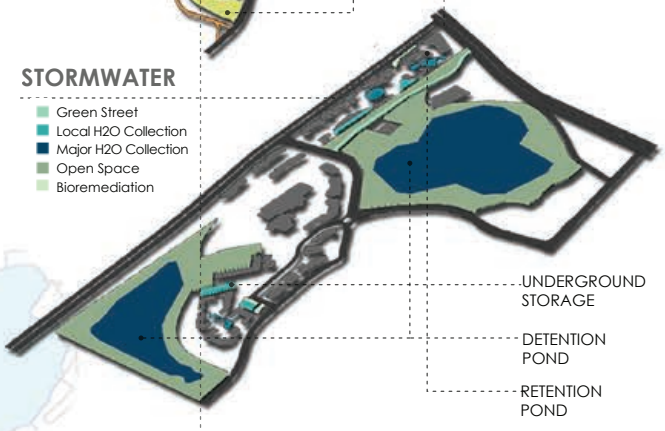
RECREATION

- Public Parks
- Bike Paths
- Urban Agriculture
- Stormwater Park
- Playground



STORMWATER

- Green Street
- Local H2O Collection
- Major H2O Collection
- Open Space
- Bioremediation



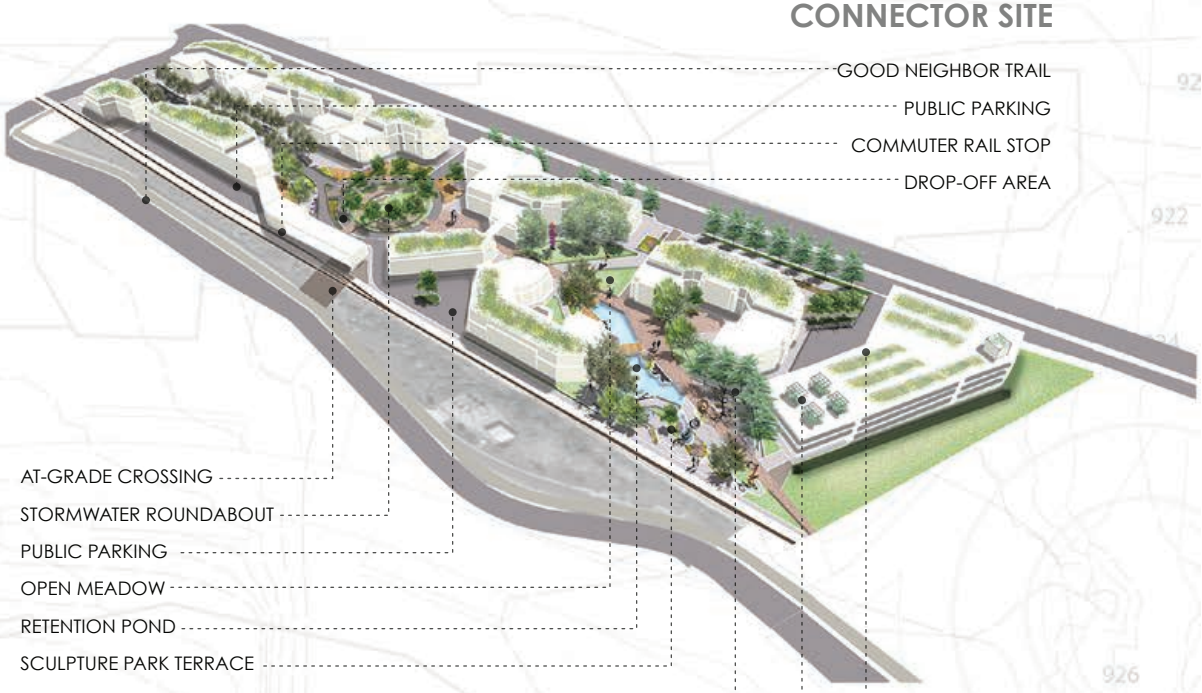
SITE DESIGN

CONNECTOR SCULPTURE PARK

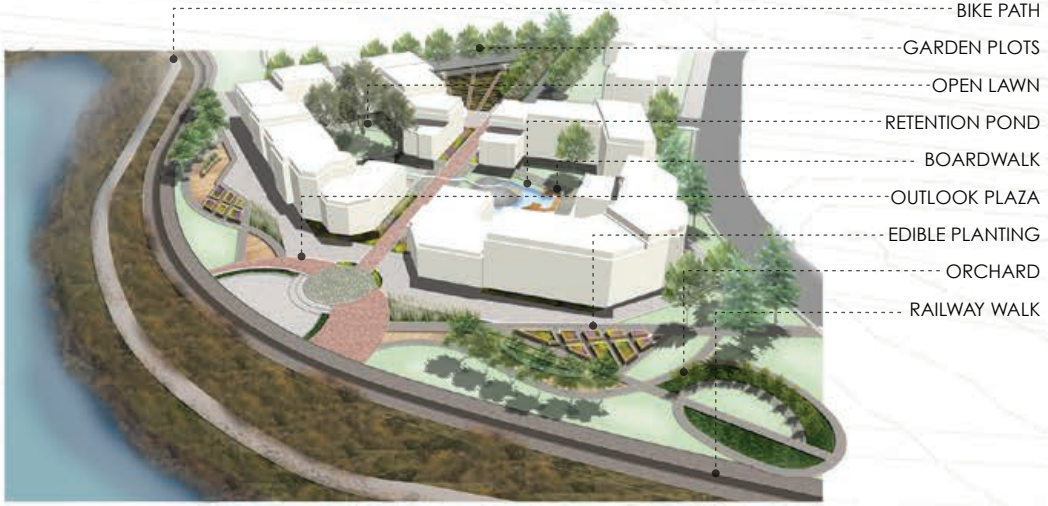
GREENWAY COURTYARD

Two different sites were selected in the master plan for specific design development. Together, the sites emphasize walkability, multi-seasonal active and sustainable living, and facilitate multi-modal transportaion. The Connector site is designated as a mixed-use area with emphasis on transit-oriented design, housing both a commuter rail station and a park & ride, and penetrated by the GNT. The aesthetic of the site reflects the local industrial history and the planting scheme is symbolic of the region's native ecological communities. The Greenway Site is a proposed affordable housing development that emphasizes community health and social capital, providing sustianable living and communal spaces including areas for urban agriculture and natural play.

CONNECTOR SITE

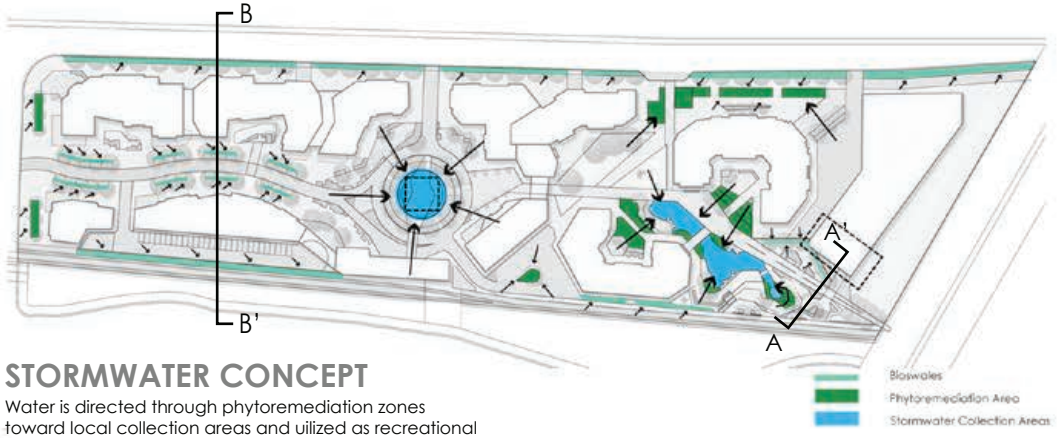


GREENWAY SITE



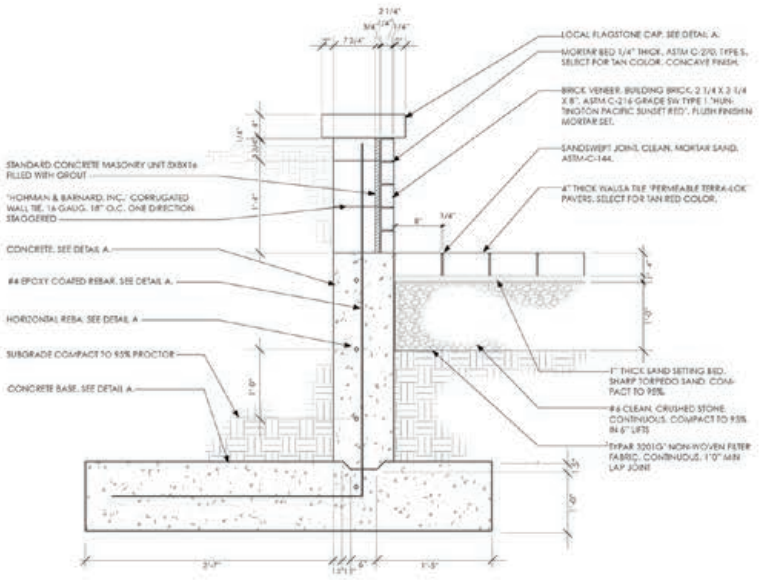
SITE DETAILS

Site details were developed for the Connector Site, including a stormwater plan and calculations, a grading plan, a planting plan and construction details. The proposed grading of the site utilizes existing topography to create three terraces parallel to the Good Neighbor Trail. In each level there are stormwater management strategies implemented that harvest every drop of water and stores the water on site in retention ponds or underground storage devices. Bioswales and other planting areas consist of phytoremediating plants which serve to cleanse rainwater that will eventually be staged on site and reused. Additionally, porous paving is utilized in some paved areas to enhance infiltration.

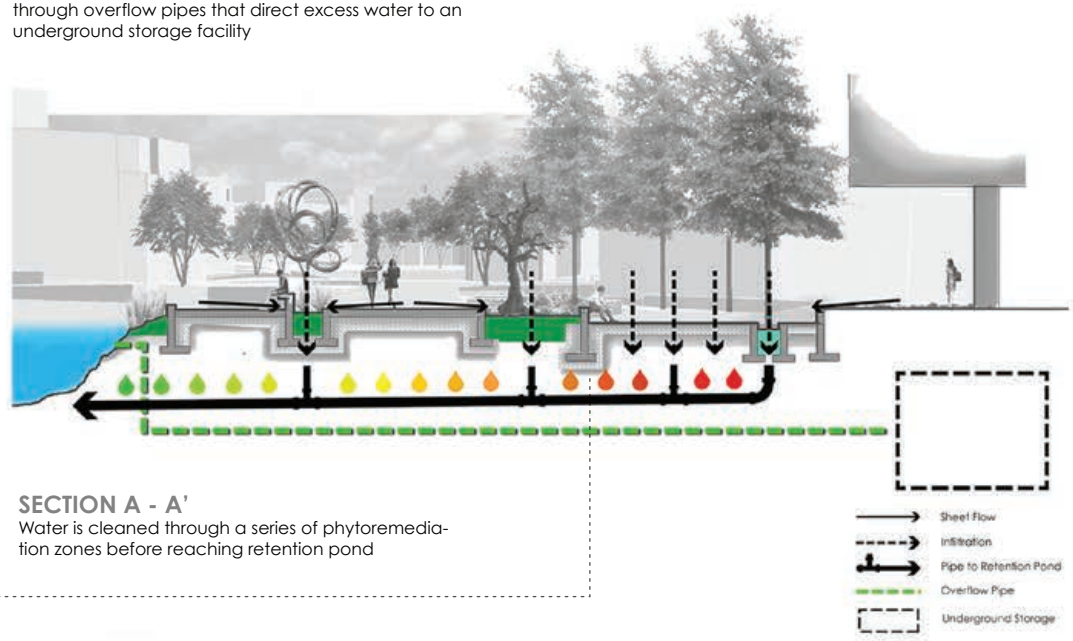


STORMWATER CONCEPT

Water is directed through phytoremediation zones toward local collection areas and ulized as recreational and aesthetic assets. These areas are connected through overflow pipes that direct excess water to an underground storage facility



PERMEABLE PAVING DETAIL



SECTION A - A'

Water is cleaned through a series of phytoremediation zones before reaching retention pond

GRADING CONCEPT

SECTION B - B'

Bioswales collect water from each terrace that are then directed toward local storage areas