

# Lake Mendota Drive Reconstruction

## Amend Geometric Design with Expert Panel for Environmental Decision Support and Green Solutions

Street Geometric Design needs an amendment to form an expert panel to provide decision support and solutions for integrated green stormwater design solutions that help make stormwater cleaner before it enters well 14 and the Lake Mendota. The Spring Harbor Neighborhood Association Ad Hoc Committee offers its support to assemble and facilitate an expert panel to examine new science-based spatially explicit applications of low impact stormwater techniques that provide climate-change related flood mitigation, cost less than traditional hard structures, last longer, and are more eco-friendly.

### Goals of clean green street reconstruction:

- Reduce flooding and erosion
- Improve shallow ground water quality
- Improve lake border and shore habitat
- Keep water temperatures cool
- Improve human health
- Keep everyone safe -- pedestrians, bicyclists and recreational swimming, fishing, boating

Less impervious surface: opportunity to reduce impervious surface with how pedestrian pathways are oriented and materials used for surfacing. Example of low-impact designs implemented in Shorewood.

- More clean water stays off pavement
- More clean water makes it to the aquifer/well 14
- More clean water makes it to Lake Mendota as spring flow
- Pedestrian traffic can be designed as a safe option
- Lower chance of disturbing burial sites and remnant effigy mounds

Reduce curb and gutter Use low impact asphalt designs for streets with similar traffic volumes (Ex. Shorewood).

- Reduce volume and rate of floodwater
- Increase clean water infiltration
- Reduce salt, dissolved pollutants, and TSS
- Reduce damage to lakeshore habitat
- Further reduce overall impervious surface
- Improve water quality in well 14, springs, and Lake Mendota
- Reduce carbon footprint by reducing cement, number of storm drains, and size of pipe

Save street side trees: Prevent any net reduction in number of trees and damage caused by construction footprint (Ex. Shorewood)

- Clean water is intercepted and stays off streets
- Further reduce effective impervious surface
- Pavement, cars, and houses are cooler
- Habitat is preserved
- Air is filtered
- Parkway feel and aesthetics are preserved

Incorporate constructed wetlands, bioretention basins and swales, and outfall retrofits. Use vegetation-based, ecologically fitting, and environmentally sustainable techniques. Get stormwater credits.

- Street water is filtered and slowed before reaching Spring Harbor beach and high-use Lake Mendota shore
- Carbon footprint and actual costs are less than hard structures
- Many opportunities in large public parks, school grounds, and 9 public lakeshore courts.
- High interest in participation from residences
- Lake border, shore and nearshore water quality and habitat are improved.
- Lakeshore and parkway aesthetics are improved.