

**COMMISSION FILE NO:** 17-057-6 **DATE INTRODUCED:** June 12, 2017

**INTRODUCED BY:** Executive Director (Signature on File in the Office of the Commission)

**REFERRED BY COMMISSION CHAIRPERSON TO:** Operations Committee

**RELATING TO:** Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

**SUMMARY:**

The Commission is requested to authorize the Executive Director to approve seven projects, M03076P52, M03076P53, M03076P54, M03076P55, M03076P56, W96001P17, and W96001P19, under the 2017 Green Solutions Program and Zoo Interchange Funding in a total amount not to exceed \$3,038,678. The 2017 Green Solutions Program funding was allocated in the approved 2017 Capital Budget. Additional funding is provided by a memorandum of understanding with the Wisconsin Department of Transportation (WisDOT) regarding stormwater management related to the Zoo Interchange Reconstruction Project and approved by the Commission in June 2013. WisDOT provided funding to the District for the design and construction of facilities within the Menomonee River Watershed to facilitate reduction of the volume and rate of runoff and to stabilize stream banks.

The primary goal of the Green Solutions Program is to achieve compliance with the District's current Wisconsin Pollutant Discharge Elimination System Permit requirement of providing green infrastructure (GI) retention capacity of 12 million gallons. Additionally, this program helps to form mutually beneficial partnerships to generate quantitative data on the effectiveness of GI in managing stormwater runoff in the District's service area and qualitative data on the implementation and feasibility of various GI practices. This program also supports the District's 2035 Vision and implementation of the Regional GI Plan.

**ATTACHMENTS:** **BACKGROUND** ☒ **KEY ISSUES** ☐ **RESOLUTION** ☒  
**FISCAL NOTE** ☒ **S/W/MBE** ☐ **OTHER** ☐ \_\_\_\_\_

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05-19-17

**COMMITTEE ACTION:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

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## SUMMARY (Cont'd)

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

The following projects and partners are recommended for funding and are requested for Commission approval:

Project Name	Applicant	Award \$	Project Number
West Edgerton Avenue Bioswales	City of Greenfield	\$166,161	M03076P52
36 <sup>th</sup> Street Biofilter	City of Franklin	\$171,858	M03076P53
2017 Green Alleys	City of Milwaukee	\$636,744	M03076P54
West Allis Library	City of West Allis	\$192,715	M03076P55
Green Alleys Phase 5	City of Wauwatosa	\$319,200	M03076P56
Green Alleys Phase 4	City of Wauwatosa	\$1,020,000	W96001P17
Wauwatosa West Parking Lot	City of Wauwatosa	\$532,000	W96001P19
	<b>Total</b>	<b>\$3,038,678</b>	

These projects are summarized below.

### **“West Edgerton Avenue Bioswales,” submitted by City of Greenfield (M03076P52)**

This project will reconstruct 1.4 miles of a minor arterial roadway, including five bioswales to capture stormwater before it discharges into the storm sewer network. The bioswales will be placed along the terrace between the back of the curb and the front of the sidewalk. The five bioswales will have a combined area of 10,200 square feet. The bioswales provide much needed storage to prevent localized stormwater flooding throughout the project area. Stormwater will also filter through the engineered soil, removing particulates and pollutants.

Location: West Edgerton Avenue, between West Loomis Road and South 27<sup>th</sup> Street, Greenfield, WI  
Gallons Captured: 179,340  
GI Strategies: Bioswale

## **SUMMARY (Cont'd)**

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

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### **“36<sup>th</sup> Street Biofilter,” submitted by City of Franklin (M03076P53)**

This project will reduce the nuisance concerns from continuous standing water in the swales along South 36<sup>th</sup> Street. High groundwater has caused persistent drainage issues in this location. The proposed grass swale replacement involves filling the ditch with approximately two feet of clear stone and adding a perforated underdrain. The stone will be covered with a geotextile fabric and a minimum of four inches of soil. These ditches will be routed to a bioretention facility on the corner of South 36<sup>th</sup> Street and West Madison Boulevard with a 10,000-square-foot area.

Location: Northwestern corner of the intersection of South 36<sup>th</sup> Street and West Madison Boulevard, Franklin, WI  
Gallons Captured: 75,000  
GI Strategies: Bioswale

### **“2017 Green Alleys,” submitted by City of Milwaukee (M03076P54)**

This project will replace nine alleys with green alleys. This will involve replacing approximately 96,000 square feet of pavement, 17,500 square feet of which will be permeable pavers. The entire lengths of the alleys will be excavated and removed to install the pavers in the center four feet of each alley over a strip of .75-inch bedding layer placed over a two-foot depth of storage with 2.5 inches of crushed stone. Stormwater runoff from garages and surface runoff will infiltrate through the pavers and into the storage area.

Location: Milwaukee, WI

1. West Cleveland Avenue, West Montana Street, South 49<sup>th</sup> Street, and South 50<sup>th</sup> Street
2. West Greenfield Avenue, South Layton Boulevard, West Scott Street, and South 28<sup>th</sup> Street
3. West Main Street, South 61<sup>st</sup> Street, South 62<sup>nd</sup> Street, and lands north
4. West Auer Avenue, West Concordia Avenue, North 87<sup>th</sup> Street, and North 88<sup>th</sup> Street
5. West Keefe Avenue, West Nash Street, North 99<sup>th</sup> Street, and North 100<sup>th</sup> Street
6. West Chambers Street, West Locust Street, North 76<sup>th</sup> Street, and North 77<sup>th</sup> Street
7. West Keefe Avenue, West Medford Avenue, West Roosevelt Drive, West Scranton Place, and North 45<sup>th</sup> Street
8. West Fiebrantz Avenue, West Hope Avenue, North 82<sup>nd</sup> Street, and North 83<sup>rd</sup> Street
9. West Auer Avenue, West Burleigh Street, North 54<sup>th</sup> Street, and North 55<sup>th</sup> Street (north/south leg)

Gallons Captured: 500,000

GI Strategies: Porous Pavement

## **SUMMARY (Cont'd)**

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

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### **“West Allis Library,” submitted by City of West Allis (M03076P55)**

This project will reconstruct a parking lot at the West Allis Library. The site has approximately 1.25 acres of impervious concrete surface. This will be replaced by asphalt pavement and 13,408 square feet of pervious pavers. The asphalt areas will drain to the permeable pavers that will capture the runoff. The stone under the pavers will be designed to capture a 3.5-inch rainfall event on the site.

Location: 7421 West National Avenue, West Allis, WI  
Gallons Captured: 46,928  
GI Strategies: Porous Pavement

### **“Green Alleys Phase 5,” submitted by City of Wauwatosa (M03076P56)**

This project will replace four alleys with green alleys. Each green alley will consist of an approximately six-foot-wide strip of pervious pavers down the center of alleys, for a total of 6,433 square feet of permeable pavers. Surface water flow will drain through the voids in the pavers to an aggregate storage area beneath. Depending on soil conditions, water will either infiltrate the native soils or be routed by an underdrain to the storm sewer system. An observation well will be installed at each alley that will be inspected quarterly and after extreme events to evaluate whether the subbase layer is properly draining.

Location: Wauwatosa, WI  
1. West Center Street, West Clarke Street, North 68<sup>th</sup> Street, North 69<sup>th</sup> Street  
2. West Center Street, West Clarke Street, North 69<sup>th</sup> Street, North 70<sup>th</sup> Street  
3. West Meinecke Avenue, West North Avenue, North 90<sup>th</sup> Street, North 91<sup>st</sup> Street  
4. West North Avenue, Jackson Park Boulevard, North 90<sup>th</sup> Street, North Swan Boulevard  
Gallons Captured: 19,299  
GI Strategies: Porous Pavement

## **SUMMARY (Cont'd)**

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

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### **“Green Alleys Phase 4,” submitted by City of Wauwatosa (W96001P17)**

This project will replace seven alleys with green alleys. Each green alley will consist of an approximately six-foot-wide strip of pervious pavers down the center of the alley. Surface water flow will drain through the voids in the pavers to an aggregate storage area beneath. Depending on soil conditions, water will either infiltrate the native soils or be routed by an underdrain to the storm sewer system. An observation well will be installed at each alley that will be inspected quarterly and after extreme events to evaluate whether the subbase layer is properly draining.

Location: Wauwatosa, WI:

1. Garfield Avenue to Gilbert Avenue between 116<sup>th</sup> Street and 117<sup>th</sup> Street
2. 122<sup>nd</sup> Street to 124<sup>th</sup> Street, south of North Avenue
3. South of North Avenue to 104<sup>th</sup> Street
4. West from 118<sup>th</sup> Street, South of North Avenue
5. 106<sup>th</sup> Street to 107<sup>th</sup> Street, south of North Avenue
6. 117<sup>th</sup> Street to 118<sup>th</sup> Street, south of North Avenue
7. 74<sup>th</sup> Street to 75<sup>th</sup> Street, between Wellauer Drive and Bluemound Road

Gallons Captured: 43,560

GI Strategies: Porous Pavement

### **“Wauwatosa West Parking Lot,” submitted by City of Wauwatosa (W96001P19)**

This project will reconstruct the main parking lot between Eisenhower Elementary School and West High School. The existing parking lot has 360 spaces over 3.9 acres. The project will include permeable pavement and biofiltration basins. Since the parking lot is sloped from west to east, permeable pavement will be installed in the eastern parking spaces in selected rows to filter and infiltrate the runoff. Biofiltration basins will be installed in the vegetated islands between the rows to accomplish the same objective.

Location: 11400 West Center Street, Wauwatosa, WI

Gallons Captured: 656,545

GI Strategies: Porous Pavement and Bioswales

## **BACKGROUND**

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

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This program provides funding support for a series of GI projects to demonstrate the importance of GI as a sustainable practice in managing the volume, rate, and quality of stormwater runoff. These projects may also catalyze more widespread GI strategies that can benefit the operation of municipal storm and sanitary sewers as well as the MMSD system. They may also provide potential added benefits to the award partners including:

- Energy savings.
- Reduction of the urban heat island effect.
- Improved aesthetics.
- Improved air quality.
- Improved water quality.

The District's 2020 Facilities Plan recommended stormwater management demonstration projects to determine best practices that the District could recommend. The Green Solutions Program allows for a wide array of GI practices to be used to manage stormwater. Projects are evaluated from a qualitative standpoint post-construction, and that information is reported in District publications.

## **RESOLUTION**

Approval of 2017 Green Solutions Program Projects M03076P52, M03076P53, M03076P54, M03076P55, M03076P56 and Zoo Interchange Funding Projects W96001P17 and W96001P19

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**RESOLVED**, by the Milwaukee Metropolitan Sewerage Commission, that the Executive Director is authorized to approve seven projects under the 2017 Green Solutions Program and Zoo Interchange Funding, M03076P52, M03076P53, M03076P54, M03076P55, M03076P56, W96001P17, and W96001P19, and that the Executive Director is directed to execute contracts and agreements for projects in a total amount not to exceed \$3,038,678.