



Public Facilities Needs Assessment

For the Valley View Road  
Sewer and Drainage Improvement  
Impact Fee District

## **Introduction**

The City of Madison has prepared this public facilities needs assessment. Improvements to the stormwater management practices and the public sanitary sewer system are required to facilitate well-planned development within a portion of the Pioneer Neighborhood Development Plan. This portion of the proposed improvements is referred to as the Valley View Road Sewer Drainage Improvement District.

The 286-acre area is located on the southwest side of the City of Madison and portions of the Town of Middleton (Refer to map; Exhibit B, attached). This area is generally unimproved and consists of mainly farmland, with the exception of some existing homes on Valley View Road and Westview Hills subdivision, located on the easterly side of County Highway M, near Valley View Road. The City of Madison is proposing to extend a new sanitary sewer interceptor and greenway to the north to serve developing lands.

## **Location Description of Impact Fee District**

Any and all parcels (platted and/or metes and bounds), or portions thereof, that reside within, or is altered to discharge within the Valley View area of the Upper Badger Mill Creek Watershed. These lands are located within the City of Madison and Town of Middleton as follows:

Parts of Southwest  $\frac{1}{4}$  Section 27; Southeast  $\frac{1}{4}$  Section 27; Northeast  $\frac{1}{4}$  Section 34; Northwest  $\frac{1}{4}$  Section 34; Southwest  $\frac{1}{4}$  Section 34; Southeast  $\frac{1}{4}$  Section 34; Northeast  $\frac{1}{4}$  Section 33 all within Town 7 North, Range 8 East, located in the Town of Middleton and the City of Madison, including approximately 286 total acres.

## **Existing public facilities**

### **Stormwater**

The only existing improved stormwater management facility is a single detention basin downstream of the Valley View area located in the northern section of Hawks Landing. Currently, there is a storm sewer serving the Hawk's Landing Plat that drains southerly and eventually into the Upper Badger Mill Creek Watershed. The run-off to the north is generally by means of culverts and ditches in unimproved road corridors or farm fields. There is a 60-inch culvert that drains lands to the north of Valley View Road, and a second culvert of the same diameter which, in conjunction with a series of smaller culverts, drains lands to the east of County Highway M.

### **Sanitary**

Existing sanitary sewer consists of a 15-inch sewer main on the northern portion of the Hawk's Landing Plat that shall be extended to serve the sewerage district to the north. Currently, the existing residential properties to the north of Hawk's Landing Plat, and within the Impact Fee District limits are served with septic tanks. Properties within Hawk's Landing are currently all served with City of Madison sanitary sewer.

## **New public facilities required for land development**

### **Stormwater**

The proposed storm sewer improvements will be part permanent and part interim improvements. The interim consists of a 50-foot drainageway, which will eventually be converted to a 100-foot greenway section when the Vetter property is fully developed. The 50-foot drainage section shall also extend to the west to serve the eastern portion of the Ripp property (Linden Park subdivision). The permanent improvements consist of a new culvert crossing Valley View Road, discharging to the greenway and a storm pipe to connect the proposed drainageway to the existing storm pond in Hawk's Landing Golf Course.

### **Sanitary**

Proposed sanitary sewer extensions include extending the existing 15-inch main to serve the future development of the Ripp land, development to the west of the proposed interceptor and greenway, and a portion of the Vetter land as it develops. A 12-inch main will continue to the north to serve the future Vetter land as it develops as well as land north of Valley View Road.

### **Project Funding**

To finance these stormwater management and sanitary sewer improvements, the City of Madison, pursuant to Wis. Stats. § 66.0617(2), has passed an Impact Fee Ordinance (Chapter 20 of Madison Code of Ordinances) that can require fees to be paid by developers to compensate for the capital costs necessary to accommodate land development.

The fee district is also a part of the Upper Badger Mill Creek Impact Fee District. This pre-existing impact fee is for stormwater management practices required to control the quantity and quality of water in the Upper Badger Mill Creek watershed. Regional improvements, including three retention ponds, three new roadway culvert crossings, and three segments of greenways were included in Upper Badger Mill Impact Fee.

### **Impact Fee**

To calculate the impact fees associated with the stormwater management portion of the project, the City of Madison first estimated the total cost to complete the project to be \$1,047,787.45 (2005 dollars), in accordance with Exhibit A. This estimate reflects both sanitary and stormwater drainage improvements. Total sanitary costs are \$419,049.32; total stormwater costs are \$628,738.13. Refer to the attached tables (Exhibit A) for a detailed cost analysis for each segment of the project.

There will be 270.3 total acres benefiting from improvements (this does not include the area of existing streets). Of this, 17.18 net acres are currently developed with onsite sewerage disposal systems in place, and they will only be receiving sanitary improvement fees at \$2,478.82 per acre. The City of Madison shall pay the stormwater management component for the existing development, which will be \$3,719.20 per acre, or \$63,895.85.

The remaining 253.12 acres will receive both sanitary sewer and stormwater drainage improvements. A net developable area was calculated to determine the impact fee rate per acre of land. This net developable area is based on 60% of the parcel area, which would take into effect the loss of land to street rights of ways, public parks, public drainage lands, and other public natural areas. The net developable area was calculated to be 151.87 acres. Based on this, the sanitary and stormwater management fees would be charged at \$6,198.02 per acre for these parcels.

### **Adjustments to Impact Fee**

The impact fee shall be adjusted annually for inflation, based on the Construction Cost Index as published in the *Engineering News Record*. The base month/year for calculating such adjustment shall be the month/year of final Common Council adoption of this Impact Fee Ordinance. Since the costs of this impact fee shall occur within a single project the City shall recalculate the initial rate upon completion of the projects and adjust the Impact Fees accordingly.

### **Effect of impact fees on housing costs**

Impact fees were estimated to be \$2,478.82 per acre for sanitary improvements for areas already developed, and \$6,198.02 per net acre for sanitary and drainage improvements in accordance with Exhibit C. The effect on housing costs was also calculated, based on average housing densities for a variety of residential zones, including the examples that follow. The additional cost incurred for the sanitary and drainage impact fees for a 0.25-acre lot would be approximately \$1,549.51. In R-4, general residence district, medium-density housing, the minimum lot size per unit is 2,000 square feet, adding about \$284.57 per unit to the cost of housing.

In the areas already developed that are receiving only sanitary improvements, the average lot size is about 0.6 acre, and will be assessed approximately \$1,487.29 for these improvements.

**COST ESTIMATES FOR NEW PUBLIC FACILITIES REQUIRED FOR  
DEVELOPMENT IN THE VALLEY VIEW ROAD SANITARY AND DRAINAGE  
IMPROVEMENT IMPACT FEE DISTRICT  
(IN 2005 DOLLARS)**

<b>GREENWAY IMPROVEMENTS</b>				
BID ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COSTS
Greenway excavation & grading	17,120	CY	\$6.00	\$102,720.00
Hauling	17,120	CY	\$2.00	\$34,240.00
Finish grading	1	LS	\$10,000.00	\$10,000.00
Erosion control	1	LS	\$28,198.75	\$28,198.75
Construction & field entrances	1	LS	\$5,340.00	\$5,340.00
Clearing & grubbing	5.75	STA	\$400.00	\$2,300.00
Seeding	20,300	SY	\$1.50	\$34,450.00
SUBTOTAL				\$213,248.75
20% ENGINEERING & CONTINGENCY				\$42,649.75
LAND ACQUISITION				\$293,031.68
<b>TOTAL</b>				<b>\$548,931.18</b>

<b>STORM SEWER SERVING RIPP PROPERTY</b>				
BID ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COSTS
Storm sewer pipe	83	LF	\$80.00	\$6,640.00
Storm sewer structures	2	Ea	\$2,237.50	\$4,475.00
Riprap	25	Tons	\$28.00	\$700.00
Trench patch	30	TF	\$45.00	\$1,350.00
Traffic Control	1	LS	\$2,500.00	\$2,500.00
SUBTOTAL				\$15,665.00
20% ENGINEERING & CONTINGENCY				\$3133.00
<b>TOTAL</b>				<b>\$18,798.00</b>

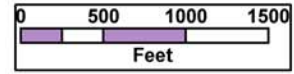
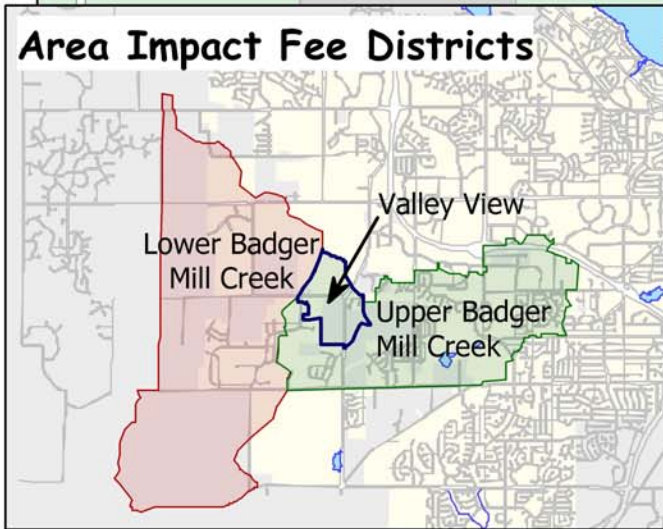
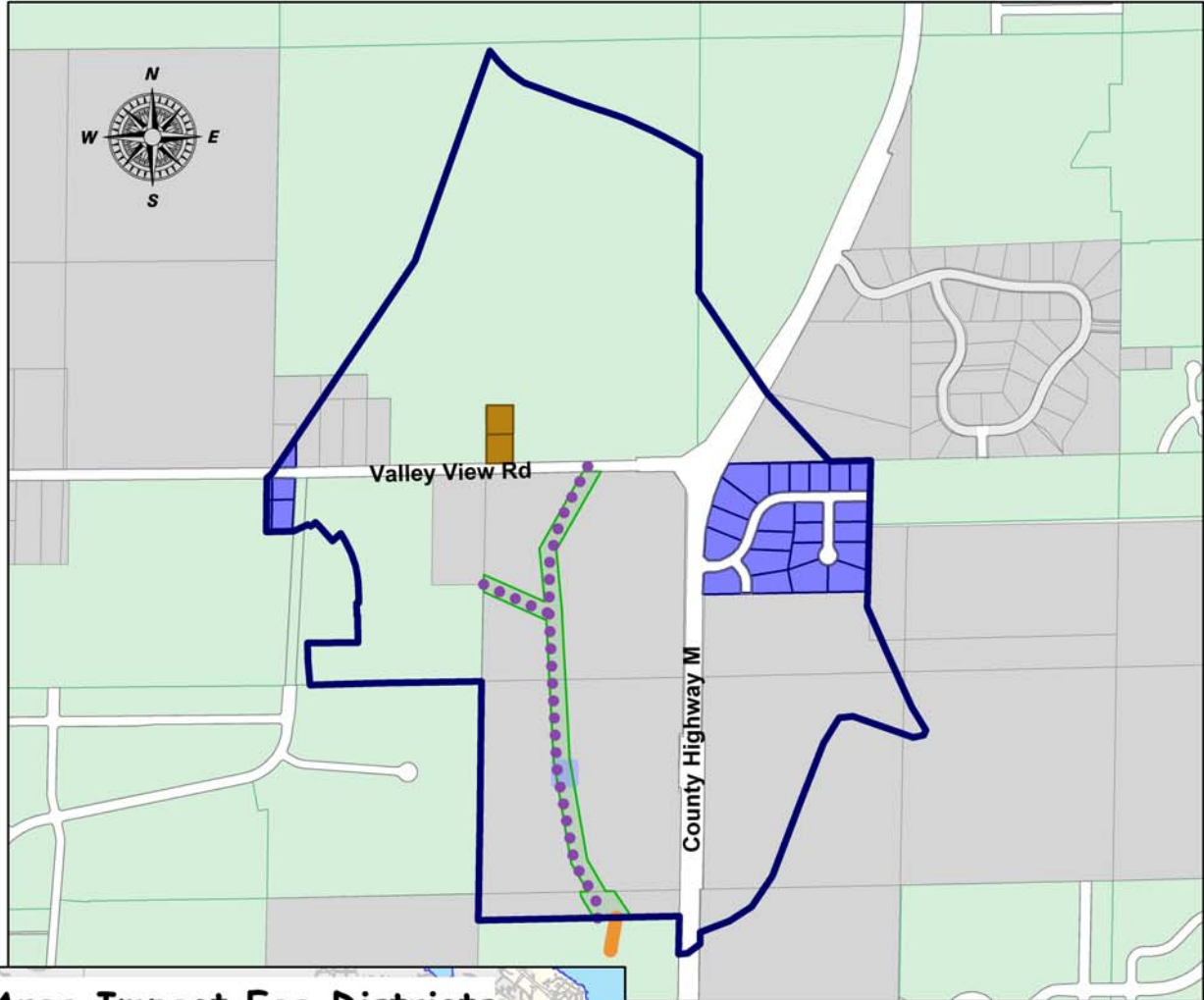
<b>CULVERT CROSSING AT VALLEY VIEW ROAD</b>				
BID ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COSTS
Storm sewer pipe	283	LF	\$50.83	\$14,384.00
Storm sewer structures	2	Ea	\$1,725.50	\$3,451.00
SUBTOTAL				\$17,835.00
20% ENGINEERING & CONTINGENCY				\$3567.00
<b>TOTAL</b>				<b>\$21,402.00</b>

<b>STORM SEWER DISCHARGING AT HAWK'S LANDING</b>				
BID ITEM	QUANTITY	UNIT	UNIT COST	COSTS
Miscellaneous removals	1	LS	\$6,150.00	\$6,150.00
Storm sewer pipe & bedding	265	LF	\$95.00	\$25,175.00
Storm sewer structures	3	Ea	\$1,116.67	\$3,350.00
Restoration	1	LS	\$7,275.00	\$7,275.00
SUBTOTAL				\$41,950.00
20% ENGINEERING & CONTINGENCY				\$8390.00
<b>TOTAL</b>				<b>\$50,340.00</b>
<b>TOTAL FOR GREENWAY &amp; STORM SEWER IMPROVEMENTS</b>				<b>\$639,471.18</b>

<b>SANITARY SEWER IMPROVEMENTS</b>				
BID ITEM	QUANTITY	UNIT	UNIT COST	COSTS
Sanitary sewer main	3,619	LF	\$71.43	\$258,509.50
Sanitary sewer structures	12	Ea	\$1,937.50	\$23,250.00
Construction entrance, mobilization & traffic control	1	LS	\$6,400.00	\$6,400.00
SUBTOTAL				\$288,159.50
20% ENGINEERING & CONTINGENCY				\$57,631.90
LAND ACQUISITION				\$73,257.92
<b>TOTAL</b>				<b>\$419,049.32</b>
<b>TOTAL FOR SANITARY IMPROVEMENTS</b>				<b>\$419,049.32</b>

<b>TOTAL PROJECT ESTIMATE</b>	
STORM CONSTRUCTION COSTS	\$346,439.50
STORM LAND COSTS	\$293,031.68
<b>STORM TOTAL</b>	<b>\$639,471.18</b>
SANITARY CONSTRUCTION COSTS	\$345,791.40
SANITARY LAND COSTS	\$73,257.92
<b>SANITARY TOTAL</b>	<b>\$419,049.32</b>
<b>GRAND TOTAL CONSTRUCTION AND LAND</b>	<b><u>\$1,058,520.50</u></b>

# Valley View Road Sewer and Drainage Improvements Impact Fee District



Legend			
	Valley View Impact Fee District		Proposed Sanitary Sewer
	Sanitary Only (17.18 ac)		Proposed Greenway Easement
	Exempt Parcels		38x60" HERCP Storm Pipe
	Town of Middleton		Field Crossing

**Valley View Impact Fee Calculations**

<b>Sanitary</b>	
Land costs	\$73,257.92
Construction costs	\$345,791.40
<b>Total Costs for Sanitary</b>	<b>\$419,049.32</b>
<i>NET* developed area paying for SANITARY ONLY (ac)</i>	<i>17.18</i>
	<small>Area receiving sanitary (w/ storm) 253.12</small>
<b>NET undeveloped area receiving Sanitary (w/storm)</b>	<b>151.872</b>
Total NET area receiving Sanitary	169.052
<b>Cost per acre for Sanitary</b>	<b>\$2,478.82</b>

<b>Stormwater</b>	
Land costs	\$260,065.62
Construction costs	\$368,672.51
<b>Total Costs for Stormwater</b>	<b>\$628,738.13</b>
<i>NET developed area receiving Stormwater*</i>	<i>17.18</i>
	<small>Undeveloped area receiving storm 253.12</small>
<b>NET undeveloped area receiving Stormwater</b>	<b>151.872 (NOT developed)</b>
Total NET area receiving Storm	169.052
<b>Cost per acre for Stormwater</b>	<b>\$3,719.20</b>

<b>\$ Recovered from Impact Fee District</b>	
Sanitary ONLY (17.18 acres)	\$2,478.82 /acre
Storm & Sanitary (151.87 NET acres)	\$6,198.02 /acre
<small>City pays for Storm in Developed Areas:</small>	<b>\$63,895.85 total (17.18 acres x \$3719.20)</b>

\* Net acreage was calculated by multiplying the total acres by 60%. It is assumed that 40% of the area will not be developed due to loss of land from street rights of way, public parks, public drainage land, and other public natural areas.