



Engineers, Surveyors, Planners, Scientists

## MEMO

Date: June 16, 2023  
To: City of Dublin  
From: Matt Stechschulte, PE  
Subject: Topiary Park  
Copies:



This memo summarizes the stormwater management approach for the Topiary Park project. The project site lies on the northeast corner of Dale Drive and Tuller Ridge Drive, and south of the Sycamore Ridge Development. According to the City of Dublin Stormwater Master Plan, this area lies within the Bridge Street District East A Exemption Area, as shown in Exhibit A, which discharges directly to the Scioto River. Due to the project being within the Bridge Street District East A Exemption Area no quantity control is required on this site. This has been confirmed with the City through email correspondence which is attached to this memo.

The Topiary Park project would be considered redevelopment per the OEPA due to the site area previously being part of Tuller Ridge Drive in 2014. Redevelopment requirements are outlined in Table 2-3 of the City's manual which states that projects that propose to disturb less than one acre and have greater than 2,000 SF of impervious cover shall meet the quality requirements outlined in Table 2-1. Table 2-1 states that for the Bridge Street District East A is required to provide water quality treatment for the 0.9-inch event which is equivalent to the OEPA standard rate of treatment. The OEPA standard treatment for redevelopment projects is described in Equation 3 of the OEPA General Construction Permit. The 0.39-acre disturbed area will reduce impervious area from 0.227 acres to 0.063 acres which corresponds to a 66% reduction to the volumetric runoff coefficient meeting the redevelopment water quality requirements by virtue of impervious area reduction without the need for further treatment.

## Post-Construction Water Quality Volume As Required Under Ohio NPDES Construction General Permit No. OHC00005

version 1.1 2020-5-7

This spreadsheet calculates the Water Quality Volume required for both new development and redevelopment projects. Green boxes indicate user input for 1) the total area disturbed, 2) planned total impervious surface and, if redevelopment, 3) total existing impervious surface, each in acres. The user must select new or redevelopment from the dropdown menu to apply the proper equation. Use the separate BMP Compliance Spreadsheets to verify a designed practice or combination of practices meets the applicable requirements including the required Water Quality Volume calculated here. This spreadsheet does not account for factors that may affect the final practice design, including offsite run-on or sediment storage volume.

### Project Details

<b>Project Name:</b>	Topiary Park		
<b>Project ID:</b>			
<b>Project Location:</b>			
<b>Project Latitude:</b>		<b>Longitude:</b>	
<b>NPDES Permit Applicant:</b>			
<b>Submitted By:</b>	Matt Stechschulte, PE		
<b>Date:</b>	6/13/2023		

### Required Water Quality Volume Calculation

Total Disturbed Area, A = 0.390 acres

Type of Development: Redevelopment ▼

**Water Quality Volume Equation:**  $WQ_v = 0.90 \text{ in.} * A * [(Rv1*0.2)+(Rv2-Rv1)] / 12$  [Equation 3]  
where,  $Rv = 0.05 + 0.9(i)$

#### PRE-CONSTRUCTION CONDITIONS

Ex. Impervious Surface = 0.227 acres  
 Ex. Impervious Fraction, i = 0.582  
 Rv1 = 0.574

#### PROPOSED POST-CONSTRUCTION CONDITIONS

Total Impervious Surface Area = 0.063 acres  
 Impervious Fraction, i = 0.162  
 Volumetric Runoff Coefficient, Rv2 = 0.195

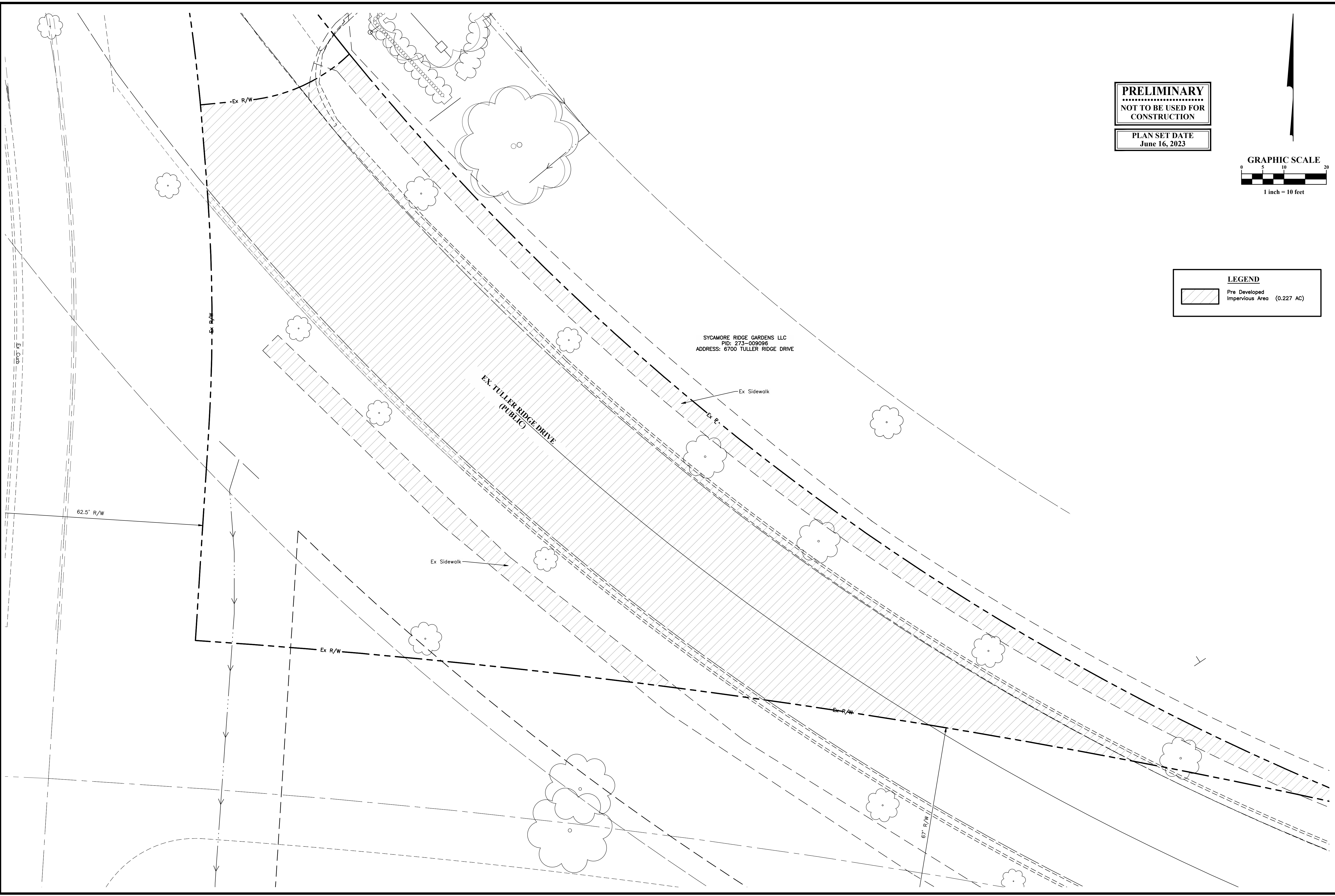
$\Delta Rv = -66 \%$

Water Quality Volume,  $WQ_v =$  \_\_\_\_\_ ac-ft = \_\_\_\_\_ cu. ft.

#### Message Center:

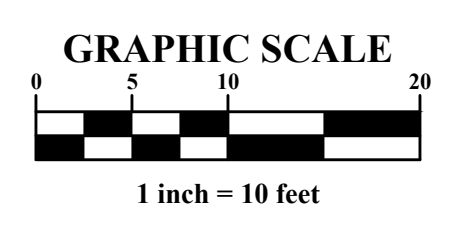
*Rv decrease of 20% or greater is sufficient*

J:\20230410\DWG\04Sheets\Exhibits\Stormwater\20230410 - Pre Developed Impervious Exhibit.dwg, Last Saved By: jgilliam, 6/16/2023 9:07 AM Last Printed By: Gilliam, James, 6/16/2023 9:09 AM (No Xrefs)



**PRELIMINARY**  
NOT TO BE USED FOR  
CONSTRUCTION

PLAN SET DATE  
June 16, 2023



**LEGEND**

 Pre Developed Impervious Area (0.227 AC)

SYCAMORE RIDGE GARDENS LLC  
PID: 273-008096  
ADDRESS: 6700 TULLER RIDGE DRIVE

MARK	DATE	DESCRIPTION

**CRAWFORD HOYING**  
development

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
FOR  
**BLOCK G  
TOPIARY PARK**  
PRE DEVELOPED IMPERVIOUS EXHIBIT

**EMHT**  
Survey, Mapping, Hydrology & Design, Inc.  
Engineers • Surveyors • Planners • Scientists  
5500 New Albany Road, Columbus, OH 43254  
Phone: 614.775.5500 Fax: 614.775.3656  
emht.com

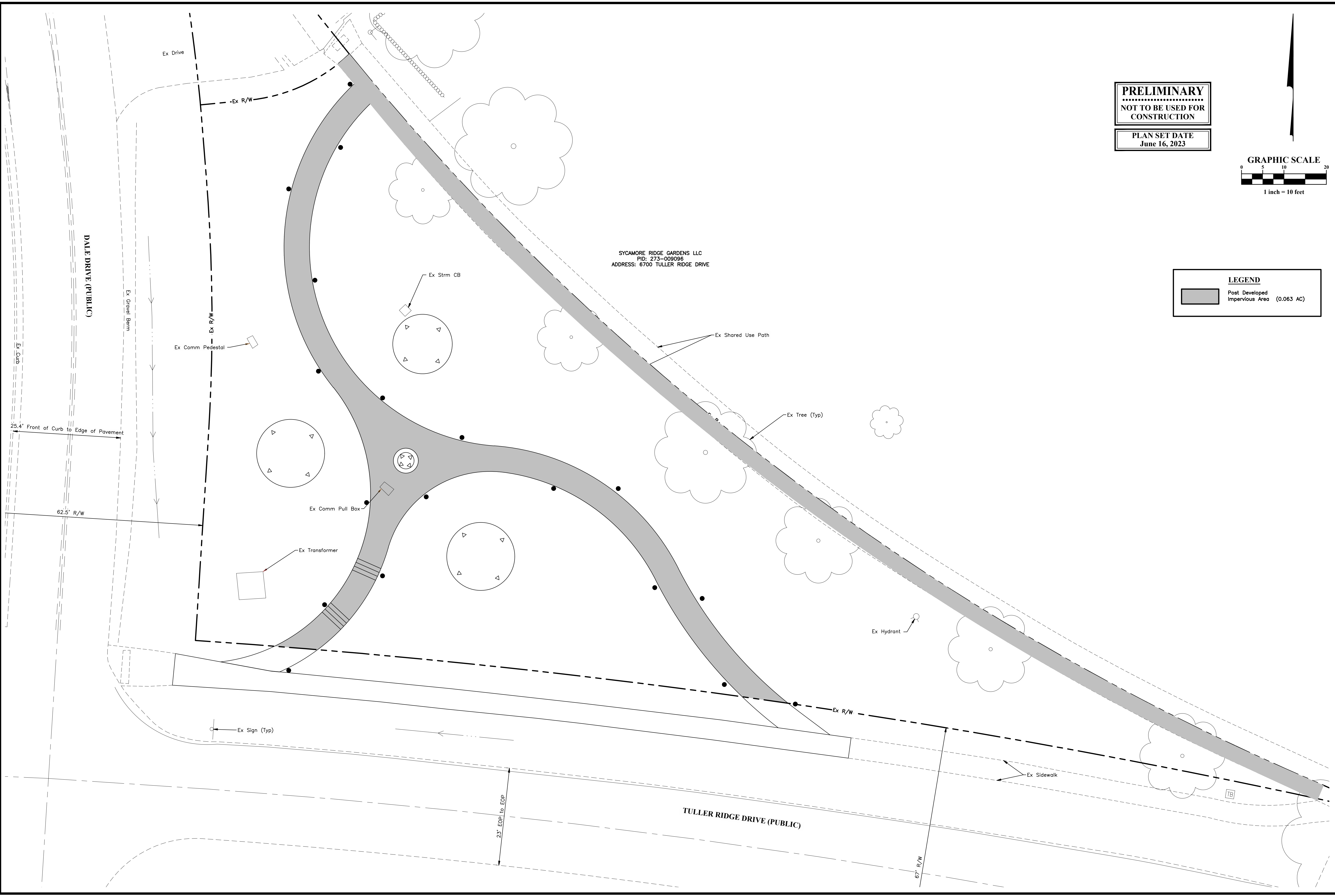
DATE  
June 16, 2023

SCALE  
1" = 10'

JOB NO.  
20230410

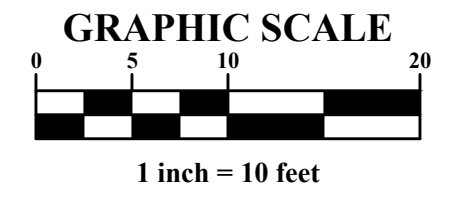
SHEET  
1/2

J:\20230410\Drawings\45Sheets\Exhibits\Stormwater\20230410 - Post Developed Impervious Exhibit.dwg, Last Saved By: jgilliam, 6/15/2023 4:39 PM Last Printed By: Gilliam, James, 6/16/2023 8:10 AM (No Xrefs)



**PRELIMINARY**  
 NOT TO BE USED FOR  
 CONSTRUCTION

PLAN SET DATE  
 June 16, 2023



**LEGEND**  
 Post Developed  
 Impervious Area (0.063 AC)

MARK	DATE	DESCRIPTION

**CRAWFORD HOYING**  
 development

CITY OF DUBLIN, FRANKLIN COUNTY, OHIO  
 STORMWATER MEMO  
 FOR  
**BLOCK G**  
**TOPIARY PARK**  
 POST DEVELOPED IMPERVIOUS EXHIBIT

**EMHT**  
 Stone, McSherry, Hershberger & Thoen, Inc.  
 Engineers • Surveyors • Planners • Scientists  
 5500 New Albany Road, Columbus, OH 43254  
 Phone: 614.757.5500 Fax: 614.757.3868  
 emht.com

DATE  
 June 8, 2023

SCALE  
 1" = 10'

JOB NO.  
 20230410

SHEET  
 2/2

## Wilson, Sarah

---

**From:** Michael Hendershot <MHendershot@dublin.oh.us>  
**Sent:** Thursday, November 3, 2022 10:34 AM  
**To:** Wilson, Sarah; Quackenbush, Brian; Kaiser, Hayden; Heidi Rose  
**Cc:** Stechschulte, Matthew  
**Subject:** RE: Bridge Park Block G - Dog Park - Stormwater Management

**Categories:** Filed by Newforma

Hi Everyone,

I just spoke with the City Engineer regarding stormwater management for the site. The City recognizes this site within the Bridge Street District A Exemption Area per Figure 2-1 of the City of Dublin Stormwater Management Design Manual. Therefore, water quantity is exempt for this site. Water quality is required in accordance with the Stormwater Management Design Manual.

Please add narrative to the plans that summarizes the stormwater management requirements and ensure water quality calculations are submitted. Please also submit the pre and post-developed hydrographs for reference.

Please let me know if you would still like to meet tomorrow to further discuss.

Thanks,

### **MICHAEL HENDERSHOT, P.E., CSSBB**

Senior Civil Engineer – Development

#### **Engineering**

5200 Emerald Parkway – Annex | Dublin, Ohio 43017  
office 614.410.4657



-----Original Appointment-----

**From:** Michael Hendershot  
**Sent:** Friday, October 28, 2022 2:36 PM  
**To:** Michael Hendershot; Wilson, Sarah; Quackenbush, Brian; Kaiser, Hayden; Heidi Rose  
**Cc:** Stechschulte, Matthew  
**Subject:** Bridge Park Block G - Dog Park - Stormwater Management  
**When:** Friday, November 04, 2022 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).  
**Where:** Microsoft Teams Meeting