



# **Barton Spring Bathhouse Rehabilitation Site-Specific SOS Amendment**

## **2201 Barton Springs Rd**

**C20-2023-022**

Leslie Lilly

Environmental Program Coordinator

Watershed Protection

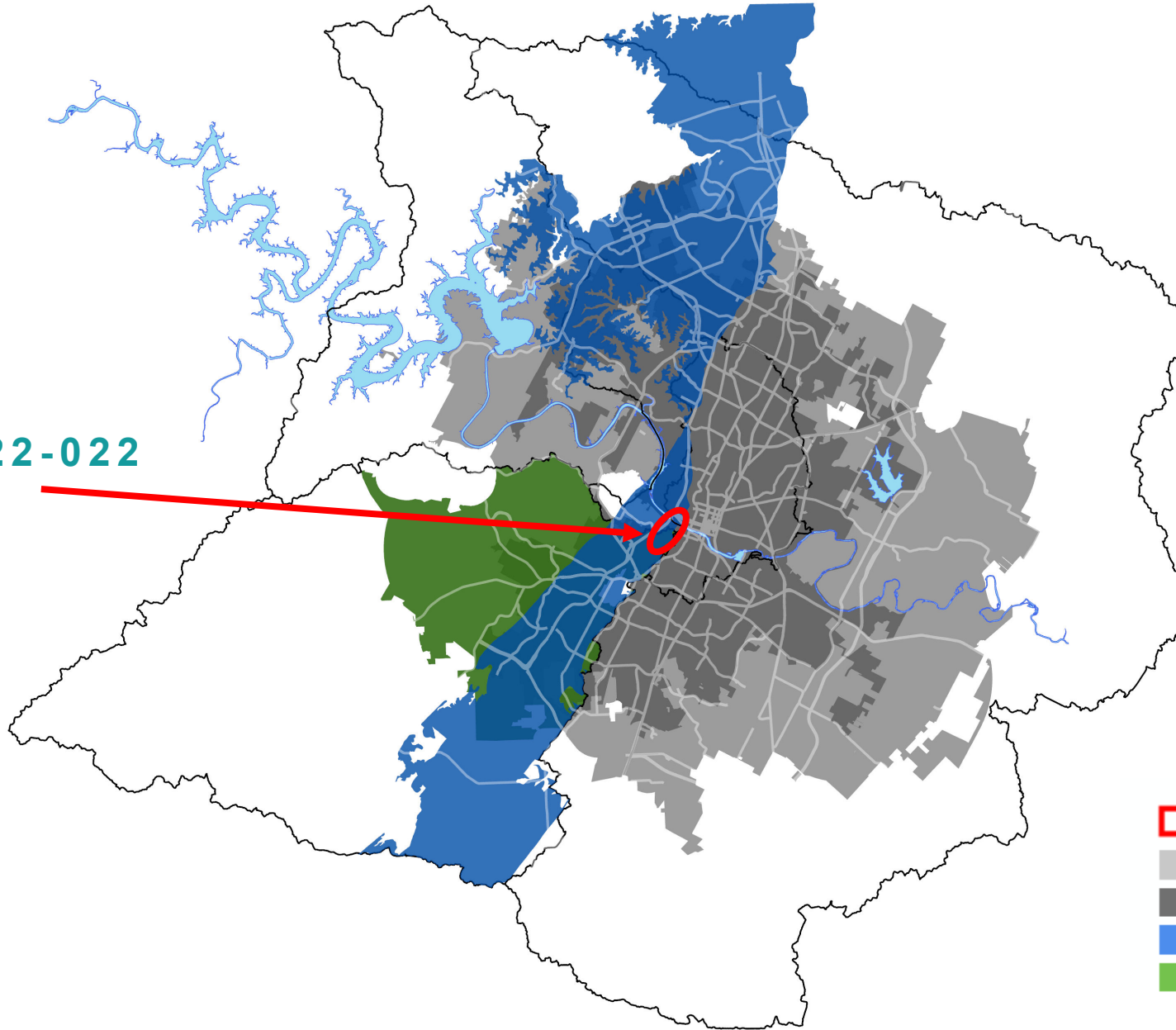


# Barton Springs Bathhouse Rehab

- Bathhouse constructed in 1947 (before SOS)
- Rehabilitation of the Bathhouse is a major component of 2009 Council-approved Barton Springs Pool Master Plan
- Funding provided by 2012 and 2018 General Obligation Bonds, Historic Preservation Fund, Barton Springs Conservancy, Watershed Protection Department, and Austin Water Department
- Requires SOS amendment to impervious cover limits and construction in the CWQZ
- Code amendment initiated by Planning Commission on June 27<sup>th</sup>, 2023



C20-2022-022



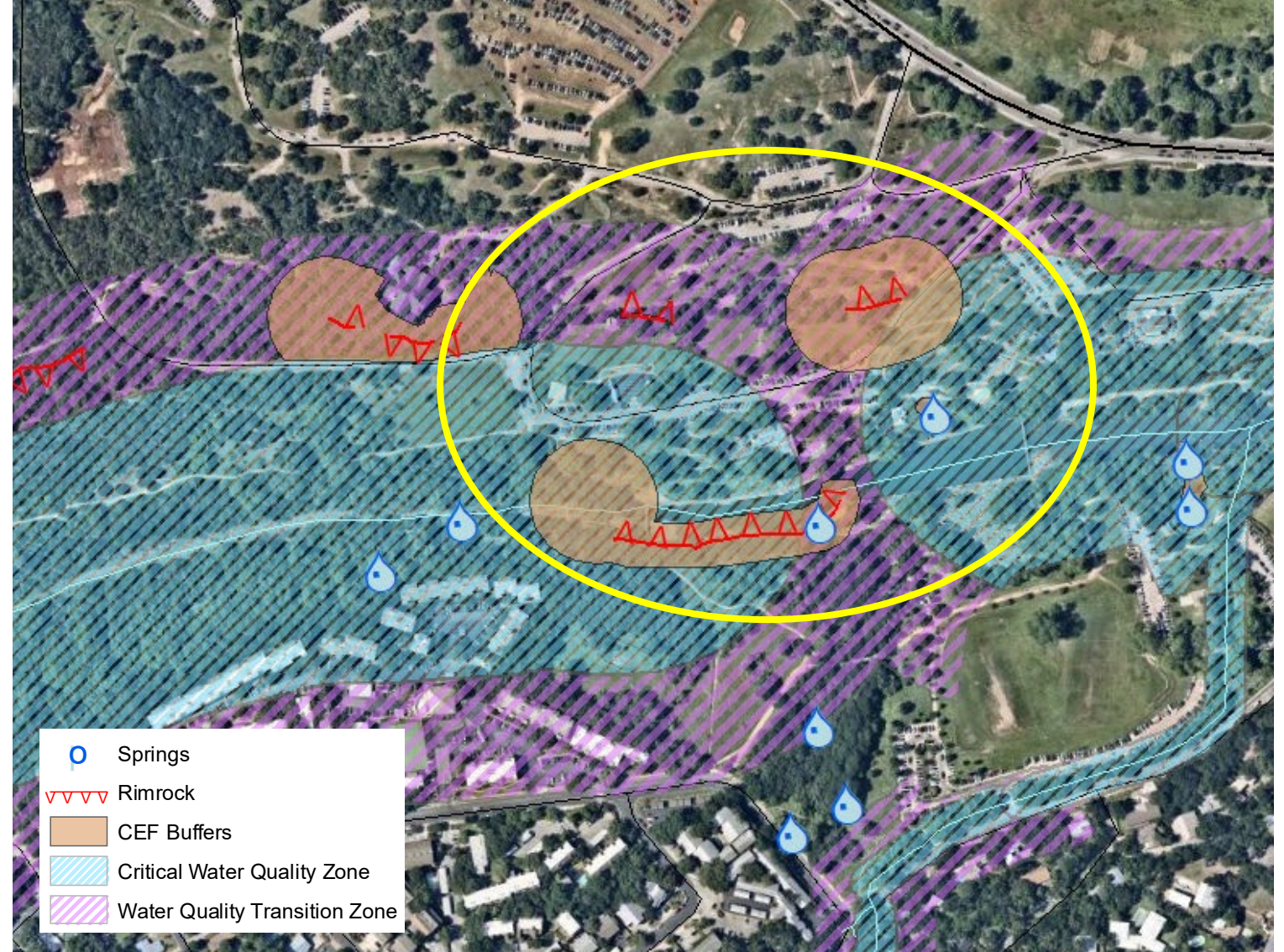
- Site Location
- Austin ETJ
- Austin City Limits
- Edwards Aquifer Recharge Zone
- Edwards Aquifer Contributing Zone





# Environmental Features

- Barton Creek Watershed
- Barton Springs Zone
- Edward Aquifer Recharge
- ~44% Impervious Cover in the Barton Creek Watershed in the recharge zone
- CWQZ and WQTZ
- CEF Features include springs (Eliza Springs and Pool Springs) and rimrock features

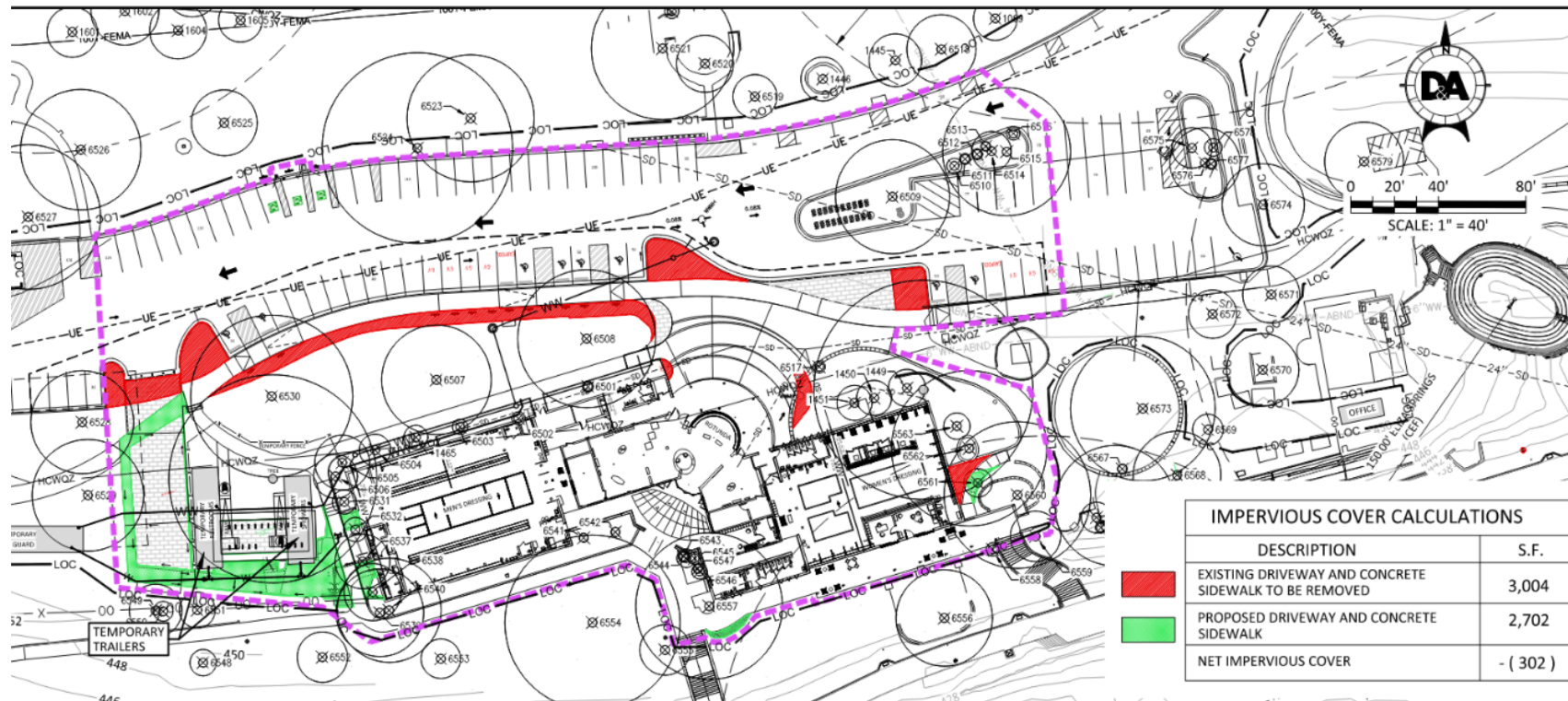






# SOS Amendment

- **Section A of 25-8-514 (Pollution Prevention Required)** shall be modified to allow impervious cover in excess of 15%.



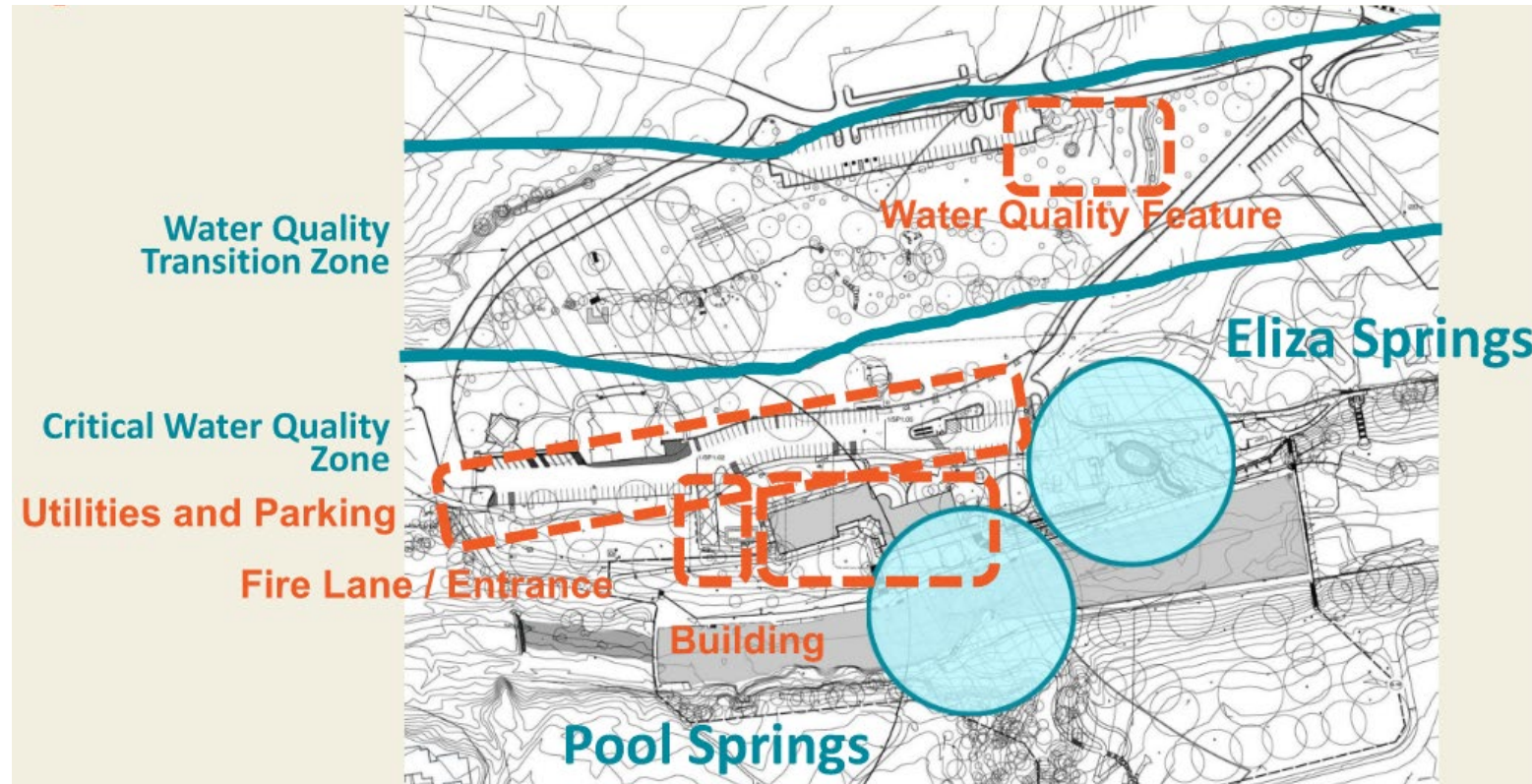
IMPERVIOUS COVER MAP

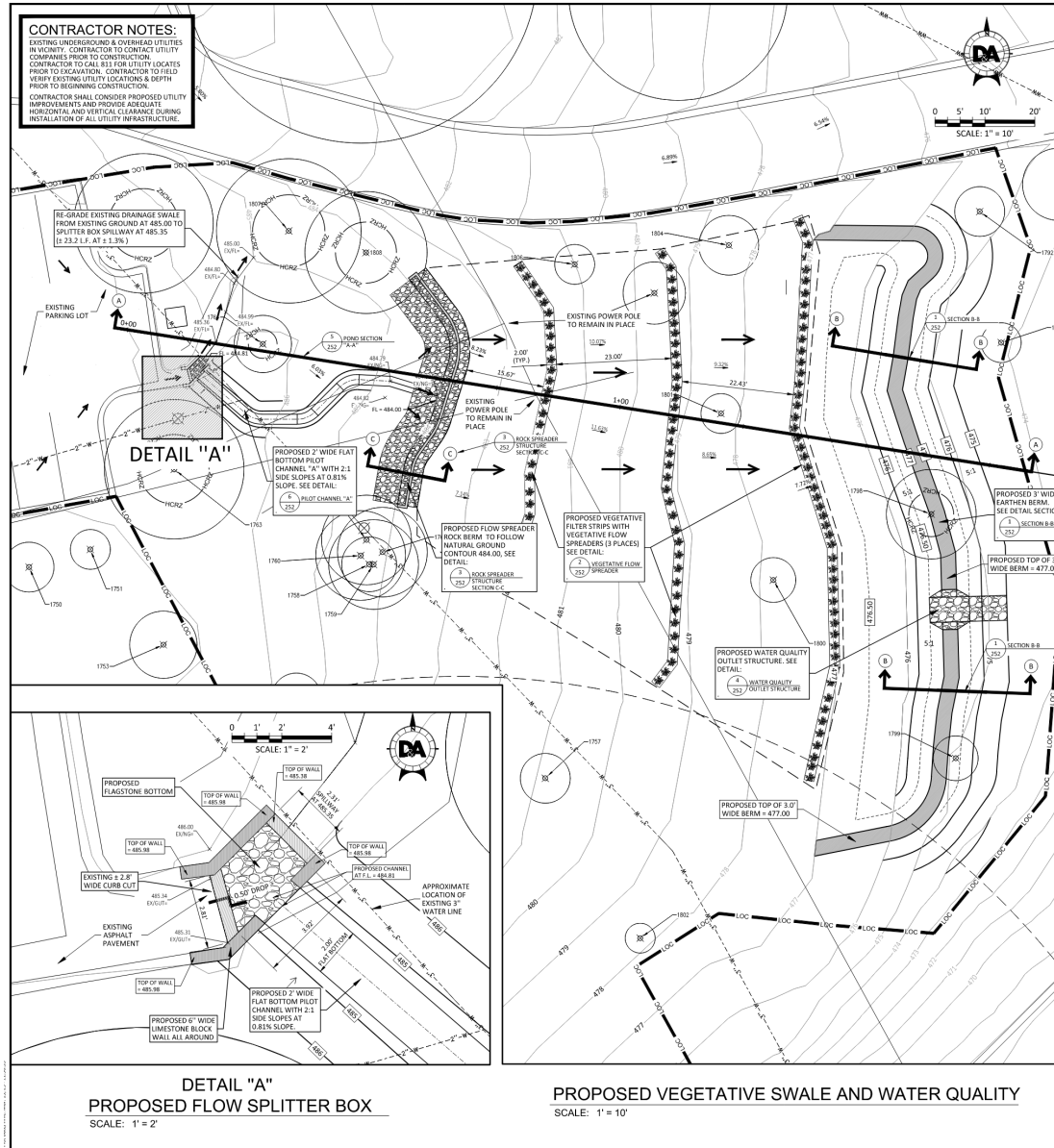
SCALE: 1" = 40'



# SOS Amendment

- **Section B of 25-8-514 (Pollution Prevention Required)** shall be modified to allow a development in the CWQZ as described in (SPC-2012-0104D(R6))





Appendix B-9: Vegetative Filter Strip

Drainage Area and Water Quality Volume Data  
(Drainage Area being treated is an alternative drainage area and impervious cover.)

Drainage Area (DA)	0.400 acre	
Drainage Area Impervious Cover (IC)	90.00%	0.360 acres
Capture Depth (CD)	1.2 inches	
Total Size Required Water Quality Volume (WQV=CD*DA*3630)	1742.40 cf	

VEGETATIVE FILTER STRIP CALCULATIONS

Drainage Area to Proposed Vegetative Filter Strip	0.400 acre	
Impervious cover of area treated by Vegetative Filter Strip (Treated Soil Type (Type A, B, C, Amended C, or Amended D	90.00%	0.360 acres

Size of Vegetative Filter Strip required per ECM 1.6.7(B)-Table 9-1 (F)

Required	Provided	average
1.380 acre	0.152 acre	

Width of Vegetative Filter Strip (VFSw)

Required Hydraulic Loading Rate per ECM 1.6.7 (H/Recom)	0.018 cf/ft	
Hydraulic Loading Rate (HLR=VFSw/VFSw)	Q2 peak	1.36 cfs

WATER QUALITY CREDIT

Impervious Area Factor (IAF=I/Treated IC/IC)	1 max 1.0	
Percent Infiltration Provided by VFS (VFI) per ECM 1.6.7.5(B)-Table 9-2	21.00%	
BMP Design Factor (BMPDF)	NA	
For HLR=0.05 and <0.15 cf/ft: BMPDF=(65)/(HLR/0.05)	max 1.0	
Water Quality Credit (WQC=IAF*BMPDF)	21.00% max 1.0	
Water Quality Volume Reduction (WQV=WQC)	366 cf	

Appendix B-5: Retention Pond / Rain Garden Calculations

Renovation work is within CWQZ, where water quality facilities are not allowed by code. Therefore water quality treatment is for an alternative drainage area for treatment of runoff from an existing parking lot.

Drainage Area Data

Drainage Area to Control (DA)	0.400 acres
Drainage Area Impervious Cover	90.00%
Capture Depth	1.20 inches
	0.00

Water quality Control Calculations

REQUIRED	PROVIDED
Water Quality Control to be Retention/Rain Garden	
25-year Peak Flow Rate to Control (Q25)	3.17 cfs
100-year Peak Flow Rate to Control (Q100)	3.78 cfs

Water Quality Volume (WQV=CD\*DA\*3630)

Retention Pond Volume	382 cf
Water Quality Elevation	476.5 ft msl
Elevation of Splitter/Overflow Weir	476.5 ft msl

Length of Splitter Weir

Required Head to Pass Q100	max 1.0 ft
Pond Freeboard Provided to Pass Q100	min 0.25 ft

Irrigation Area Calculations

Soil Info from Travis County USGS Soil Maps	NA
Soil Permeability	0.2 in/hr
Pond Drawdown Time	<72 hrs

Retention Pond configuration & storage

Flowline area	228 ft
Imp area	1300 ft
Stage storage	0.5 ft msl
	382 cf

Summary Water Quality Treatment

vegetative filter strip water quality volume crec	366 cf
retention rain garden storage volume	382 cf
total volume treated	748 cf
rainfall runoff treatment capture depth	0.52 inches

**DA DOUCET & ASSOCIATES**  
Civil Engineering - Eminent - Surveying Mapping  
4001 E. Highway 335, Suite 100  
Austin, TX 78746 (512) 453-2400  
www.doucetengineers.com  
Firm Registration Number 3937

**ZILKER METRO - BARTON  
SPRINGS  
BATHHOUSE REHABILITATION  
IMPROVEMENTS**

**STORM WATER  
TREATMENT PLAN**



**NEW SHEET**

**SITE PLAN RELEASE**

SITE PLAN APPROVAL: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_  
FILE NUMBER: \_\_\_\_\_ APPLICATION DATE: \_\_\_\_\_  
APPROVED BY COMMISSION ON: \_\_\_\_\_ (PINDER SECTION) \_\_\_\_\_  
CHAPTER: \_\_\_\_\_ OF THE CITY OF AUSTIN CHARTER \_\_\_\_\_  
EXPIRATION DATE (25-54): \_\_\_\_\_ CASE MANAGER CLARISA L. DODD  
PROJECT EXPIRATION DATE (2025): \_\_\_\_\_ DATE: \_\_\_\_\_

Development Services Department  
RELEASED FOR GENERAL COMPLIANCE: \_\_\_\_\_ (ZONING) \_\_\_\_\_  
Rev. 1: \_\_\_\_\_ Correction 1 \_\_\_\_\_  
Rev. 2: \_\_\_\_\_ Correction 2 \_\_\_\_\_  
Rev. 3: \_\_\_\_\_ Correction 3 \_\_\_\_\_

Final plan must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code cannot at the time of filing, and all required Building Permits, water or water of contamination (for building permit) or water resources must be approved prior to the Project Expiration Date.

SPC-2012-0104D (R6)

Designed: TFC  
Drawn: ZD RT  
Reviewed: TFC  
Date: 3/15/2023

**SHEET  
251**

Project No.:  
(P) 1563-004





# Staff Recommendation

**Staff recommends approval of the proposed site-specific SOS amendments with the following conditions:**

- The project will decrease total impervious cover on the site by 302 sq. ft.
- The project will improve water quality treatment by constructing a rain garden and vegetative filter strips to treat run off from 0.4 acres of previously untreated parking lot area.
- After renovation is complete, the project will repair impacted soils and revegetate and restore the site to conditions consistent with uses prior to construction.
- The project will use native plant species for all proposed plantings exterior to the buildings associated with the Barton Springs Bathhouse Rehabilitation Project





# Questions?

## Contact Information:

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