APPENDIX R-7
RAINWATER HARVESTING SYSTEM CALCULATIONS
FOR DEVELOPMENT PERMITS
218 South Lamar, Austin, Texas

Legend
Not In Compliance
Do Not Modify Values

DRAINAGE AREA DATA:				
Drainage Area to Control (DA)	1.26	ac.		
Drainage Area Impervious Cover (IC)	88.00%			
Capture Depth (CD)	1.180	in		
WATER QUALITY CONTROL CALCULATIONS:	Required		Provided	
The Water Quality Control is to be **Rainwater Harvesting**				
25-year Peak Flow Rate to Control (Q25) cfs.	7.6	cfs		
100-year Peak Flow Rate to Control (Q100) cfs.	10.1	cfs		
Water Quality Volume (WQV = CD*DA*3630) cf.	5,397	cf	6,000	cf
Convert to Gallons (7.48 gal/cf)	40,370	gal.	44,880	gal.
Water Quality Elevation msl				ft msl
Elevation of Splitter/Overflow Weir (≥ WQ elev) ft. msl	≥	ft msl		ft msl
IRRIGATION AREA:				
Cistern Drawdown Time (min 48 hr., max 120 hr.)	≥ 48	hrs.	120	hrs.
Soil Permeability (min. 0.06)	≥ 0.06	in/hr	0.06	in/hr
Irrigation Rate			0.2	in/hr
Irrigation Area	≤ 2,998	sf	10,131	sf
WATER QUALITY CREDIT:				
Impervious Area Factor (IAF) max 1.0	≤ 1.00		0.926	
BMP Design Factor (BMPDF) max 1.0	≤ 1.00		0.760	
Water Quality Credit (WQC = IAF *BMPDF) max 1.0	≤ 1.00		0.704	
Water Quality Volume Reduction (WQV * WQC)			4,224.00	cf

REQUIRED DETENTION VOLUME CALCULATIONS

	EX DA1	PROP. DA (1+3+4)	DELTA
2YR (AC-FT)	0.2	0.3	0.1
10YR (AC-FT)	0.3	0.6	0.3
25YR (AC-FT)	0.4	0.7	0.3
100 YR (AC-FT)	0.6	1	0.4
500YR (AC-FT)	0.8	1.3	0.5

LANDSCAPE SOIL VOLUMES FOR REIRRIGATION

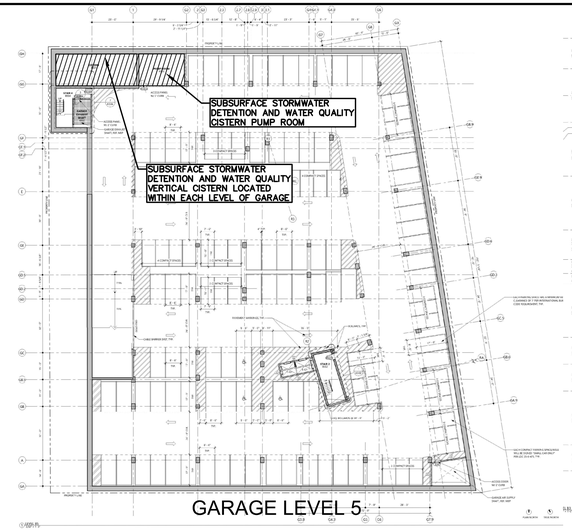
WATER QUALITY SUMMARY TABLE	
Required Water Quality Volume, cfs	5,397.00
Provided Water Quality Volume, cfs	6,000.00
Soil Volume for Reirrigation, cf	30,680.00
Soil Pore Space, %	52%
Water Permeability, in/hr	30.1

CISTERN STORAGE VOLUME

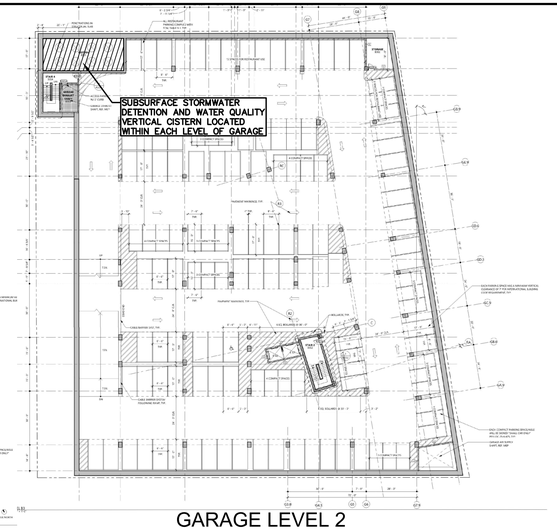
Cistern			
Stage (ft msl)	Area	Storage	
(Elevation)	(sf)	Volume (cf)	
413.00	810.00	0	
418.00	810.00	4,050	
420.40	810.00	5,994	WSE
423.00	810.00	8,100	
428.00	810.00	12,150	
429.10	810.00	13,041	2-YR
433.00	810.00	16,200	
438.00	810.00	20,250	
439.90	810.00	21,789	10-YR
443.00	810.00	24,300	
448.00	810.00	28,350	
450.50	810.00	30,375	25-YR
453.00	810.00	32,400	100-YR
458.00	810.00	36,450	
459.00	810.00	37,260	

DRAINAGE COMPARISON SUMMARY TABLE

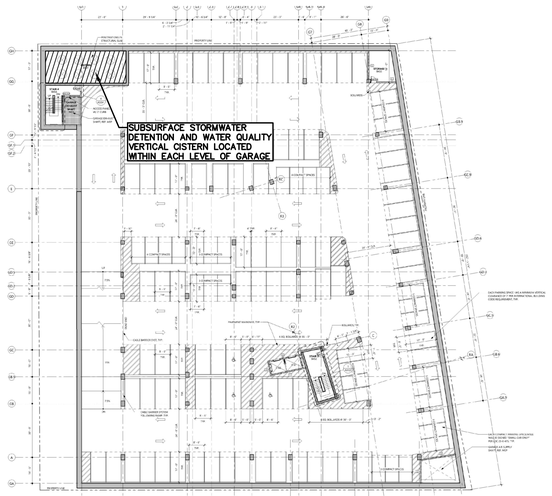
Drainge Comparison Summary Table			
Point of Analysis	Existing Q, cfs	Proposed (without Detention) Q, cfs	Proposed (with Detention) Q, cfs
1	7.7	12.7	7.7
2	0.8	0.5	0.5
3	5.1	0.5	0.5



GARAGE LEVEL 5



GARAGE LEVEL 2



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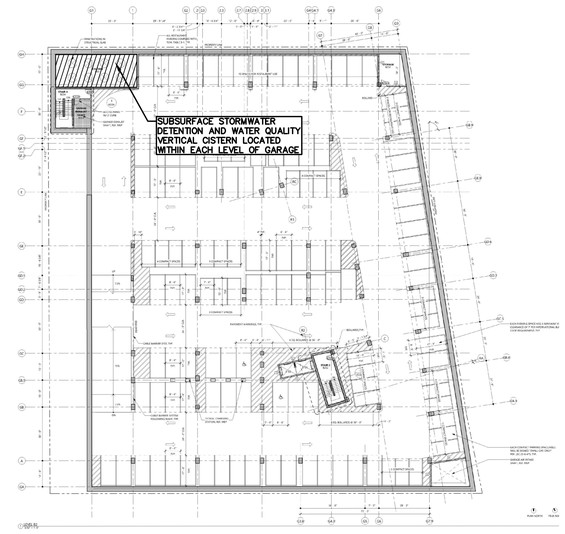
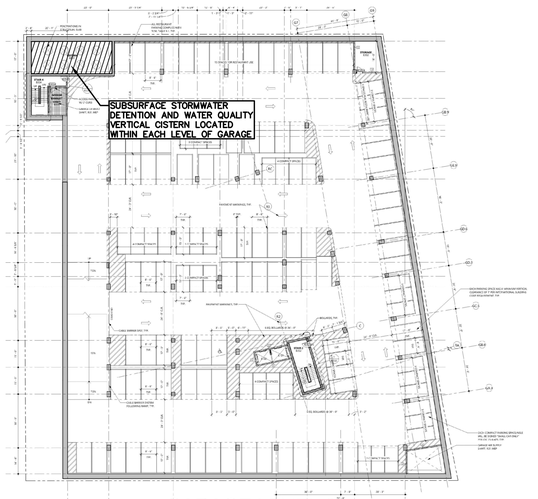


GARAGE LEVEL 1



GARAGE LEVEL 3

FOR CITY USE ONLY:

SITE PLAN APPROVAL Sheet 17 of 37
FILE NUMBER: SP-2019-0297C APPLICATION DATE: JULY 15, 2019
APPROVED BY COMMISSION ON:_____ UNDER SECTION 112 OF
CHAPTER 25-5 OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE (25-5-81,LDC)_____ CASE MANAGER J. SILTALA
PROJECT EXPIRATION DATE (ORD.#970905-A)_____ DWPZ ____DDZ X

Director, Development Services Department

RELEASED FOR GENERAL COMPLIANCE:_____ ZONING: PUD

Rev. 1_____ Correction 1_____
Rev. 2_____ Correction 2_____
Rev. 3_____ Correction 3_____

FINAL PLAT MUST BE RECORDED BY THE PROJECT EXPIRATION DATE, IF APPLICABLE. SUBSEQUENT SITE PLANS WHICH DO NOT COMPLY WITH THE CODE CURRENT AT THE TIME OF FILING, AND ALL REQUIRED BUILDING PERMITS AND/OR A NOTICE OF CONSTRUCTION (IF A BUILDING PERMIT IS NOT REQUIRED), MUST ALSO BE APPROVED PRIOR TO THE PROJECT EXPIRATION DATE.

DATE	NO.	REVISION	APPROVAL

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STATE OF TEXAS
JONAH D. MANKOVSKY
110095
LICENSED
7/2/2021

WATER QUALITY CALCULATIONS, NOTES & DETAILS

CITY OF AUSTIN
APPROVED
Date 10/21/2021

218 SOUTH LAMAR
218 SOUTH LAMAR, AUSTIN, TEXAS 78704

PFLUGER WR & MC & PFLUGER SPOUSAL

DRAWN BY: MB/RM
DESIGNED BY: JDM
QA / QC:
PROJECT NO.: 113586-00002

SHEET 17 OF 37

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