



August 27, 2025
149658038

Town of Howey-in-the-Hills
101 N. Palm Avenue
Howey-in-the-Hills, FL 34737

RE: Drainage Calculations for Hillside Groves Amenity Center

To whom it may concern,

The following letter is to provide the stormwater calculations of the proposed Hillside Groves Amenity center project. The project includes a proposed amenity center, a pool, playground, and associated parking. The project location is within Tract R, a 1.2 AC tract part of the Hillside Grove development in Howey-in-the-Hills. The stormwater treatment and attenuation was included in the SJRWMD permit modification (18971-21).

The stormwater system was designed for a maximum impervious area of the tract of 70%. The developed area is summarized as follows:

Tract area:	52,849 SF
Allowed Impervious Area:	36,994 SF
Proposed Impervious Area:	33,596 SF

This project does not exceed the maximum allowable impervious area for the site; therefore, this project meets all criteria established by the original permit.

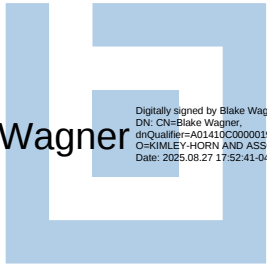
Feel free to contact me at (407) 536-4440 should you have any questions or require any additional information.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Blake J. Wagner, P.E.
Project Manager

Blake Wagner



Digitally signed by Blake Wagner
DN: CN=Blake Wagner,
dnQualifier=A01410C000001978DE85F06000865C2,
O=KIMLEY-HORN AND ASSOCIATES INC, C=US
Date: 2025.08.27 17:52:41-04'00'

STORM DRAIN TABULATION FORM

PROJECT : Hillside Groves Amenity Center
JOB #: 149658038

PREPARED BY: SJP DATE: 8/27/2024
CHECKED BY: BSA DATE:

LOCATION OF UPPER END	STRUCTURE NUMBER	TYPE OF STRUCTURE / LINE	LENGTH (FT)	DRAINAGE		SUB TOTAL C * A	INLET PIPE	TIME OF FLOW IN SECTION (MIN)	INTENSITY (IN/HR)	TOTAL C * A	INCR. TOTAL	INFLOW (CFS)	TOTAL RUNOFF (CFS)	INLET OR GUTTER ELEV. (FT)	HYD. GRADE LINE			TOTAL		DIAMETER (IN)	HYD. GRAD.			ZONE:	FREQ:	(YEAR)	REMARKS										
				AREA (AC)	UPPER										LOWER	SLOPE (%)	VELOCITY (FPS)	CAPACITY (CFS)	MIN. HGL COVER =		MIN. PIPE COVER =	FREQ. FACTOR:	1.00	1.00	2.00												
																										C = 0.95		C = 0.45	C = 0.20	PHYSICAL	7	10					
																																		CROWN	MINOR	MINOR	MIN. PHYS.
			INCR.	TOTAL	TIME OF CONC. (MIN)	TIME OF FLOW IN SECTION (MIN)																															
0.17		D	74	0.10	0.10	0.10	10	0.30	7.41	0.11	0.00	0.81	85.80	85.26	85.26	0.00	0.00	18	0.01	0.5	0.81																
	D-01			0.00	0.00	0.00								83.28	82.92	0.00	0.0		0.49	4.2	7.34																
	D-02			0.07	0.07	0.01								10.00	81.78	81.42	0.36		0.00	0.013	0.18	2.5	4.42														
0.14		P7	136	0.14	0.24	0.22	10	0.54	7.34	0.24	0.00	1.74	86.06	85.26	85.22	0.04	0.04	18	0.03	1.0	1.74																
	D-02			0.00	0.00	0.00								82.92	82.24	0.00	0.0		0.50	4.2	7.44																
	D-03			0.00	0.07	0.01								10.30	81.42	80.74	0.68		0.04	0.013	0.18	2.5	4.42														
0.38		D	147	0.26	0.50	0.47	10	0.58	7.21	0.51	0.00	3.67	86.00	85.22	85.04	0.18	0.18	18	0.12	2.1	3.67																
	D-03			0.00	0.00	0.00								82.24	81.50	0.00	0.0		0.50	4.2	7.47																
	EX-S-209			0.12	0.19	0.04								10.83	80.74	80.00	0.74		0.18	0.013	0.18	2.5	4.42	10 YR Tailwater Elev.	85.04												

Please see below Excerpt from SJRWMD PERMIT 18971-28 for Tailwater information at connection to existing storm inlet

DRAINAGE CALCULATIONS

Hillside Grove

LAKE COUNTY, FLORIDA

Prepared for:

Meritage Homes

5337 Millenia Lakes Blvd, Suite 235

Orlando, Florida 32839

Phone: (407) 284-4152



CONNELLY & WICKER INC.

10060 Skinner Lake Drive, Suite 500

Jacksonville, Florida 32246

Florida Registry: 3650

Phone: (904) 265-3030 Fax: (904) 265-3031

www.cwieng.com

CWI Project No.: 21-04-0008

Date: September 6, 2022

Revised Date: April 14, 2025

All elevations reference the North American Vertical Datum of 1988 (NAVD88)

Upper To Lower	Type Structure Upstream	Pipe Length (Ft)	Drainage Area (Ac +/-)			Tc (min.)	TL (min.)	i (In / Hr.)	Total (CA)	Q Runoff (cfs)	Top Elev.	Hydraulic Grade EL.			Pipe Size		Pipe Mat.	n	Hydraulic Gradient / Physical			C Head Loss	Minor Loss (str)	Remarks
			C = VARIES									Crown / Flowline			Span (in.)	Rise (in.)			Slope (%)	Vel. (fps)	Q (cfs)			
			A	C	C*A							Up End	Dn End	Fall										
S-124 To S-121	SINGLE CURB INLET	162	0.22	0.40	0.09	15.52	0.88	5.85	0.64	0.52	93.26	88.95	88.29	0.55	15	15	RCP	0.013	0.34%	3.08	3.78	0.7	0.10	
			1.38	0.40	0.55							86.50	86.10											
			1.60	0.40	0.64							85.25	84.85	0.40					0.25%	2.62	3.21			
S-125 To S-124	SINGLE CURB INLET	39	0.72	0.40	0.29	15.00	0.46	5.93	0.29	1.71	93.15	90.46	90.40	0.03	15	15	RCP	0.013	0.07%	1.40	1.72	1.0	0.03	
			0.00	0.00	0.00							90.50	90.40											
			0.72	0.40	0.29							89.25	89.15	0.10					0.26%	2.67	3.27			

S-126 To S-124	SINGLE CURB INLET	40	0.66	0.40	0.26	15.00	0.52	5.93	0.26	1.57	93.18	90.50	90.45	0.02	15	15	RCP	0.013	0.06%	1.29	1.58	1.0	0.03	
			0.00	0.00	0.00							90.55	90.45											
			0.66	0.40	0.26							89.30	89.20	0.10					0.25%	2.63	3.23			

S-200	STD. MES					17.86					-	84.81			24	24	HP							SMF-02 10 Yr D.H.W. EL. = 84.81
			2.13	0.41	0.87							80.60												
												78.60												
S-201 To S-200	TYPE J MH	36	0.00	0.45	0.00	17.48	0.39	5.57	0.87	0.00	87.05	84.85	84.81	0.01	24	24	HP	0.012	0.04%	1.55	4.88	0.6	0.02	
			2.13	0.41	0.87							80.70	80.60											
			2.13	0.41	0.87							78.70	78.60	0.10					0.28%	4.11	12.92			
S-202 To S-201	SINGLE CURB INLET	159	0.39	0.45	0.18	15.84	1.64	5.80	0.87	1.04	86.16	84.96	84.85	0.08	24	24	RCP	0.013	0.05%	1.62	5.09	0.7	0.03	
			1.74	0.40	0.69							80.90	80.70											
			2.13	0.41	0.87							78.90	78.70	0.20					0.13%	2.55	8.02			
S-203 To S-202	SINGLE CURB INLET	56	0.47	0.45	0.21	15.44	0.40	5.86	0.69	1.25	86.05	85.10	84.96	0.09	18	18	RCP	0.013	0.15%	2.32	4.10	0.7	0.06	
			1.27	0.38	0.48							83.40	83.25											
			1.74	0.40	0.69							81.90	81.75	0.15					0.27%	3.08	5.44			
S-204 To S-203	SINGLE CURB INLET	43	1.27	0.38	0.48	15.00	0.44	5.93	0.48	2.86	86.06	85.17	85.10	0.03	18	18	RCP	0.013	0.08%	1.63	2.89	1.0	0.04	
			0.00	0.00	0.00							83.50	83.40											
			1.27	0.38	0.48							82.00	81.90	0.10					0.23%	2.87	5.07			

S-205	STD. MES					16.81					-	84.81			24	24	HP							SMF-02 10 Yr D.H.W. EL. = 84.81
			3.08	0.42	1.30							79.70												
												77.70												
S-206 To S-205	SINGLE CURB INLET	67	0.32	0.45	0.14	16.34	0.47	5.73	1.30	0.85	86.16	84.93	84.81	0.06	24	24	HP	0.012	0.09%	2.38	7.48	0.6	0.05	
			2.76	0.42	1.15							79.80	79.70											
			3.08	0.42	1.30							77.80	77.70	0.10					0.15%	3.01	9.47			
S-207 To S-206	SINGLE CURB INLET	57	0.45	0.45	0.20							85.03	84.93	0.05	24	24	RCP	0.013	0.09%	2.14	6.73	0.7	0.05	
																			0.18%	3.02	9.48			
S-208 To S-207	SINGLE CURB INLET	43													15	15	RCP	0.013	0.21%	2.39	2.93	1.0	0.09	
			1.29	0.38	0.49							82.30	82.20	0.10					0.23%	2.54	3.12			

HGL TAILWATER

S-209 To S-207	SINGLE CURB INLET	47	1.02	0.45	0.46	15.00	0.90	5.93	0.46	2.72	86.00	85.04	85.03	0.01	24	24	HP	0.012	0.01%	0.87	2.75	1.0	0.01	
			0.00	0.00	0.00							80.00	79.90											
			1.02	0.45	0.46							78.00	77.90	0.10					0.21%	3.60	11.30			