Hydrograph by Return Period

Project Name: Native Sun Construction, Proposed Drainage Plan, CD Civil Design LLC

Hydrology Studio v 3.0.0.19

06-24-2021

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	Rational	A1		0.655		0.832	0.975			1.406
2	Rational	B1		0.532		0.676	0.793			1.142
3	Rational	C1/Point 1		1.413		1.793	2.103			3.032
						7.065	8.285			11.94
						2.199	2.579			3.717
						8.375	9.821			14.16
						1.508	1.768			2.549
						7.096	8.321			12.00
						26.24	30.77			44.36

Check Calculations for Basin P1 and Basin E1. This design point discharges into Unincorporated El Paso County and the proposed condition peak flow rate is greater than existing. Per County criteria the flow exiting the property must be equal to or less than historic.

Additionally, provide analysis from the pipe to the suitable outfall. The proposed condition has change the characteristics of the runoff from sheet flow to concentrated flow. Additional offsite improvements may be required if the flow path between the pipe and what is considered the suitable outfall is shown to not be hydraulically adequate. See the County's Engineering Criteria Manual Chapter 3 Section 3.2.4 for the definition of suitable outfall.

You can contact the El Paso County review engineer (Gilbert LaForce, gilbertlaforce@elpasoco.com, 719-331-7134) for clarification. Provide the following reference file no. OAR21-102.

Hydrograph by Return Period

Project Name: Native Sun Construction, Exisitng Drainage Plan, CD Civil Design

Hydrology Studio v 3.0.0.19

06-24-2021

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	Rational	Point 1	0.790	0.953		1.238	1.492	1.861	2.166	2.487
2	Rational	Point 2	1.932	2.332		3.029	3.650	4.554	5.299	6.086
3	Rational	Point 3	3.158	3.813		4.952	5.967	7.445	8.663	9.949