BERISFORD SUBDIVISION **CHANNEL CALCULATIONS**

CHANNELS - EX	CHANNELS - EXISTING FLOWS																			
CHANNEL	DESIGN POINT	SLOPE (FT/FT)	BOTTOM WIDTH (B, FT)	SIDE SLOPE (Z)	CHANNEL DEPTH (FT)	FRICTION FACTOR (n)	DP/ BASIN	Q100 FLOW (CFS)	CHANNEL FLOW % OF BASIN	CHANNEL FLOW (CFS)		Q100 DEPTH (FT)	Q100 VELOCITY (FT/S)	TOP WIDTH (FT)	FROUDE NUMBER	EASEMENT WIDTH (FT)	CHANNEL LINING			
		0.040	10	4.4	2.0	0.020		22.0	40	10.0		0.0	4.0	40.0	4.54					
CHANNEL CT. I	DPS	0.046	10	4.1	2.0	0.030	DPS	32.9	40	13.2		0.3	4.3	12.2	1.51	30.0	GRASS			
CHANNEL C1.2	DP3	0.054	4	4:1	2.0	0.030	С	30.0	15	4.5		0.2	3.9	5.9	1.54	30.0	GRASS			
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CHANNEL C1.3	DP3	0.047	20	10:1	2.0	0.030	DP3	32.9	100	32.9		0.3	4.5	26.3	1.53	5 0.0	GRASS			
		0.050	24	7.5	2.0	0.030		32.0	100	32.0	_	0.3	4.5	28.2	1 56	250.0	CRASS			
CHANNEL CT.4	DF3	0.030	24	7.5	2.0	0.030	DFJ	52.9	100	32.9		0.5	4.5	20.2	1.50	3 0.0	GRASS			
CHANNELS - D	HANNELS - DEVELOPED FLOWS															<u> </u>				
CHANNEL	DESIGN POINT	SLOPE (FT/FT)	BOTTOM WIDTH (B, FT)	SIDE SLOPE (Z)	CHANNEL DEPTH (FT)	FRICTION FACTOR (n)	DP/ BASIN	Q100 FLOW (CFS)	CHANNEL FLOW % OF BASIN	CHANNEL FLOW (CFS)		Q100 DEPTH (FT)	Q100 VELOCITY (FT/S)	TOP WIDTH (FT)	FROUDE NUMBER	EASEMENT WIDTH (FT)	CHANNEL LINING			
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CHANNEL C1.1	DP3	0.048	10	4:1	2.0	0.030	DP3	36.2	40	14.5		0.3	4.5	12.3	1.53	~ 30.0	GRASS			
CHANNEL C1 2	590	0.054	4	1.1	2.0	0.030	6	3/3	15	51	\vdash	0.3	4.0	60	1 55	30.0	GRASS			
CHANNEL CT.2	DIS	0.034	4	4.1	2.0	0.030		54.5	10	5.1		0.5	4.0	0.0	1.55		GIVAGG			
CHANNEL C1.3	DP3	0.047	20	10:1	2.0	0.030	DP3	36.2	100	36.2		0.3	4.7	26.6	1.54	50.0	GRASS			
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CHANNEL C1.4	DP3	0.050	24	7.5	2.0	0.030	DP3	36.2	100	36.2	\square	0.3	4.7	28.4	1.57	5 0.0	GRASS			

1) Channel flow calculations based on Manning's Equation

2) n = 0.03 for grass-lined non-irrigated channels (minimum)

3) Vmax = 5.0 fps for 100-year flows w/ grass-lined channels

JPS Response:

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- Per 10/30/24 phone conference with Daniel
- Torres, this comment was addressed by adding
- the Froude Number column to demonstrate no
- significant increase between existing and
- developed flow conditions; text at top of page 7 of
- report provides discussion regarding the
- negligible drainage impact, and additional
- discussion has been provided to address the high froude #'s.

Ogntrol Blankets / Turf Reinforcement Mats (Eronet SC150 or equal)

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Unresolved:

- These values show supercritical
- flow rates. Please address how
- impacts will be mitigated in these
- swales. At a minimum address
- within report high froude #'s.

11/22/2024