Memorandum

To: Stone Bridge Crossing Lot 7 Team

From: Scott Nolan, E.I.T, Project Civil Engineer – SLR Consulting

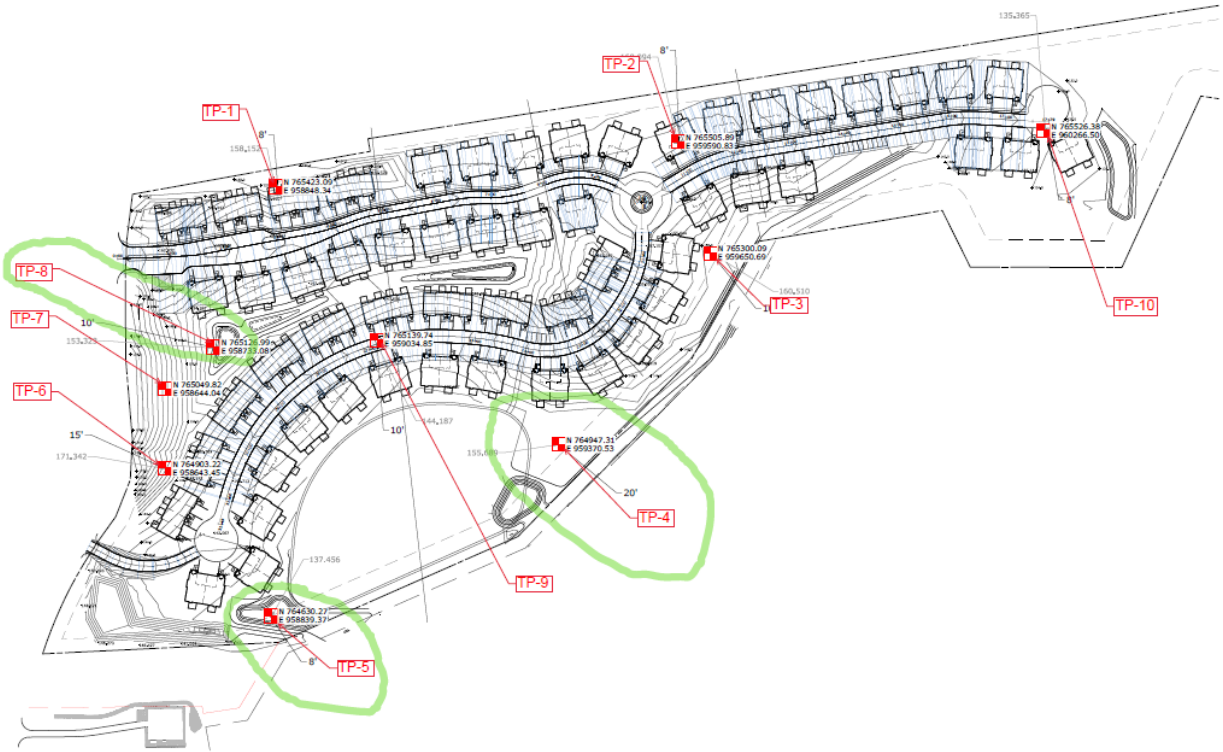
Date: May 14, 2021

Subject: Permeability Testing Results

Date of Testing: April 29th, 2021

Weather: 61°F, Cloudy

Locations of Test Pits (circled in green):



Test Pit Readings:

Test Pit: 4
Date: 4/29/2021
00"-48" RED-BROWN FINE SAND
48"-156" RED-BROWN MEDIUM SAND WITH TRACE SILT
156"-162" MEDIUM GRAY SAND

MOTTLING-N/A
GROUNDWATER-N/A
LEDGE-N/A
ROOTS-N/A
RESTRICTIVE-N/A

Test Pit: 5
Date: 4/29/2021
00"-60" RED-BROWN FINE SAND
60"-96" MEDIUM GRAY SAND

MOTTLING-N/A
GROUNDWATER-N/A
LEDGE-N/A
ROOTS-N/A
RESTRICTIVE-N/A

Test Pit: 8
Date: 4/29/2021
00"-24" RED-BROWN FINE SAND
24"-84" GRAY CLAY WITH SAND
84"-132" MEDIUM GRAY SAND

MOTTLING-SOME @ 24" (DUE TO CLAY LAYER)
GROUNDWATER-N/A
LEDGE-N/A
ROOTS-N/A
RESTRICTIVE-N/A

Results: Permeability samples were taken at 48" from TP-4, TP-5 and TP-8, representing the elevation of the bottom of the proposed stormwater basin, or at least as close to the bottom without the need for trench boxes and so the samples could be collected safely given the sandy soil conditions in the field. The permeability sample taken from TP-4 was run in the lab but was determined to be over-compacted and not suitable for an accurate permeability test. The permeability sample taken from TP-8 was taken at 48" directly in the center of the clay layer. The bottom of the basin would be into the gray sand layer below, which would have a much better permeability, however a sample could not be safety obtained that deep in the test pit.

Sample	Sample Round	L (inches)	H1 (inches)	H2 (inches)	t (min)	t (hours)	K (in/hr)	K (ft/day)
TP 4 Depth 48"	1	6	13	12.6	5.00	0.083	2.25	4.500
	2	6	12.6	12.2	5.00	0.083	2.32	4.645
	3	6	12.2	11.8	5.00	0.083	2.40	4.800
	4	6	11.8	11.2	10.00	0.167	1.88	3.757
	5	6	11.2	10.6	10.00	0.167	1.98	3.963
	6	6	10.6	10	10.00	0.167	2.10	4.194
	7	6	10	9.6	10.00	0.167	1.47	2.939
	8	6	9.6	9.1	10.00	0.167	1.93	3.850
	9	6	9.1	7.7	30.00	0.500	2.00	4.000
				sample average			**2.036**	**4.072**

Sample	Sample Round	L (inches)	H1 (inches)	H2 (inches)	t (min)	t (hours)	K (in/hr)	K (ft/day)
TP 5 Depth 48"	1	6	13	10.3	5.00	0.083	16.69	33.373
	2	6	10.3	7.8	5.00	0.083	19.89	39.779
	3	6	7.8	5.8	5.00	0.083	21.18	42.353
				sample average			**19.251**	**38.502**

Sample	Sample Round	L (inches)	H1 (inches)	H2 (inches)	t (min)	t (hours)	K (in/hr)	K (ft/day)
TP 8 Depth 48"	1	6	13	12.9	5.00	0.083	0.56	1.112
	2	6	12.9	12.8	5.00	0.083	0.56	1.121
	3	6	12.8	12.7	5.00	0.083	0.56	1.129
	4	6	12.7	12.55	10.00	0.167	0.43	0.855
	5	6	12.55	12.35	10.00	0.167	0.58	1.157
	6	6	12.35	12.25	10.00	0.167	0.29	0.585
	7	6	12.25	12.2	10.00	0.167	0.15	0.294
	8	6	12.2	12.1	10.00	0.167	0.30	0.593
	9	6	12.1	11.8	30.00	0.500	0.30	0.603
				sample average			**0.414**	**0.828**

Sample	Sample Round	L (inches)	H1 (inches)	H2 (inches)	t (min)	t (hours)	K (in/hr)	K (ft/day)
TP 5 Depth 48" Trial 2	1	6	13	8.4	10.00	0.167	15.48	30.953
	2	6	8.4	5.4	10.00	0.167	15.65	31.304
				sample average			**15.564**	**31.129**