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SOIL INVESTIGATION REPORT
109 MORNINGSIDE DRIVE SOUTH
WESTPORT, CONNECTICUT
MARCH 12, 2020

I conducted an on-site investigation of the soils on the property that is located at 109 Morningside Drive South in Westport, Connecticut on July 3, 9, 16, 25, 26, 2019, August 12, 2019, and October 14, 25, 2019. The examination for wetland soils was conducted by inspection of approximately 140 soil samples taken with spade and auger. On the July 16th site visit, we dug 22 test pits with a backhoe. The entire property was investigated. On March 12, 2020, I returned to the site with Jay Fain, Soil Scientist. We flagged an area of wetlands toward the north end of the site with flags 201 through 209.

Inland wetlands in Connecticut, according to the Connecticut General Statutes, are lands, including submerged lands, which consist of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey of the NRCS. Watercourses include rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent. Intermittent watercourses are to be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation.

The wetland boundary was marked in the field with pink flags numbered 1A, 1 through 9 and 101 through 109. The wetland soils around the pond (a watercourse) consist of Aquents (1); the wetlands at the north end of the site consist of Leicester fine sandy loam (4). The non-wetland soils on-site consist of Ninigret and Tisbury soils (21), Agawam fine sandy loam (29), Woodbridge fine sandy loam (45), Sutton fine sandy loam (50), Paxton and Montauk fine sandy loams (84) and Udorthents, smoothed (308). The soil map units contain inclusions of other soil types. The results of this soil survey are subject to change until the wetland boundary is accepted by the Westport Conservation Department.

TEST HOLE A (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-20"	A	10YR 3/2	silt loam	
20-40"	Bw	10YR 4/4	fine sandy loam	cobbles; no groundwater

TEST HOLE B (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-21"	Cfill	10YR 3/2	fine sandy loam	bsg; topsoil as fill
21-26"	Ab	10YR 3/1	silt loam	no mottles;
26-51"	2Bw	10YR 4/3	silt loam	no mottles; no groundwater

TEST HOLE C (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-25"	Cfill	10YR 3/2	fine sandy loam	bsg; pipe; wood; no groundwater

TEST HOLE D (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-39"	Cfill	10YR 3/2	fine sandy loam	bsg; cable, metal, wood, rocks

TEST HOLE E (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-21"	A	10YR 3/2	fine sandy loam	
21-40"	Bw	10YR 4/3	fine sandy loam	c2d 7.5 YR 4/6 mottles; no H2O

TEST HOLE F (SOMEWHAT-POORLY-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-13"	A	10YR 3/2	fs loam-silt loam	
13-26"	Bw1	2.5Y 5/3	fine sandy loam	c2d 7.5 YR 4/6 mottles
26-37"	Bw2	10YR 5/1	silt loam	c2d 7.5 YR 4/6 mottles; no H2O

TEST HOLE G (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	A	10YR 3/2	fs loam-silt loam	
12-20"	Bw1	10YR 4/4	fine sandy loam	no mottles
20-25"	Bw2	10YR 3/3	silt loam	no mottles; no groundwater

TEST HOLE G (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	A	10YR 3/2	fs loam-silt loam	
12-20"	Bw1	10YR 4/4	fine sandy loam	no mottles
20-25"	Bw2	10YR 3/3	silt loam	no mottles; no groundwater

TEST HOLE H (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-18"	A	10YR 3/2	silt loam	
18-24"	Cfill	10YR 4/1	silt loam	bsg; c1f 7.5YR 3/4 mottles (relic)
24-44"	2B	10YR 4/4	fine sandy loam	c2d 10YR 4/6 & 2.5Y 6/2 mottles no groundwater

TEST HOLE I (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-14"	A	10YR 3/2	silt loam	
14-61"	Cfill	10YR 5/1 &10YR 2/1	silt loam sand	bsg; no mottles; mixed materials
61-89"	2B	10YR 4/4	fine sandy loam	no mottles; groundwater @ 83"

TEST HOLE J (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-17"	A	10YR 3/2	silt loam	
17-24"	Cfill	10YR 4/2	silt loam	bsg; no mottles

TEST HOLE K (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	A	10YR 3/2	silt loam	
12-29"	Cfill	10YR 4/2	silt loam & sand	bsg; no mottles
29-72"	2C	10YR 4/4	fine sandy loam	no mottles; no groundwater

TEST HOLE L (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	A	10YR 3/2	silt loam	
12-73"	Cfill	10YR 4/2	silt loam & sand	bsg; no mottles; no groundwater

TEST HOLE M (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	A	10YR 3/2	silt loam	
12-28" (relic)	Cfill	10YR 5/2	silt loam	bsg; c2d 7.5 YR 4/6 mottles
28-74	2C	10YR 4/4	fine sandy loam	f1f 7.5 YR 4/6 mottles no groundwater

TEST HOLE N (SOMEWHAT-POORLY-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-15"	A	10YR 3/3	silt loam	
15-25"	Bw	10YR 4/3	silt loam	f1f 7.5 YR 4/6 mottles no groundwater

TEST HOLE O (SOMEWHAT-POORLY-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-14"	A	10YR 3/3	silt loam	
14-28"	Bw	10YR 4/3	silt loam	f1f 7.5 YR 4/6 mottles no groundwater

TEST HOLE P (SOMEWHAT-POORLY-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-19"	A	10YR 3/3	silt loam	
19-25"	Bw	10YR 4/3	fine sandy loam	f1f 7.5 YR 4/6 mottles no groundwater

TEST HOLE Q (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-14"	A	10YR 3/3	silt loam	
14-34"	Bw	10YR 4/4	silt loam	no mottles; no groundwater

TEST HOLE R (SOMEWHAT-POORLY-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-11"	A	10YR 3/3	silt loam	
11-20"	Bw	10YR 5/3	silt loam	c2d 10YR 4/6 mottles no groundwater

TEST HOLE S (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-12"	Cfill	10YR 3/3	silt loam	
12-25"	Cfill	10YR 3/1	sandy loam	no mottles
25-33"	Cfill	10YR 4/3	loamy sand	no mottles; no groundwater

TEST HOLE T (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-11"	A	10YR 3/2	silt loam	
11-20"	Bw	10YR 3/3	silt loam	no mottles; no groundwater

TEST HOLE U (WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-11"	A	10YR 3/2	silt loam	
11-20"	Bw	10YR 4/3	sandy loam	no mottles; no groundwater

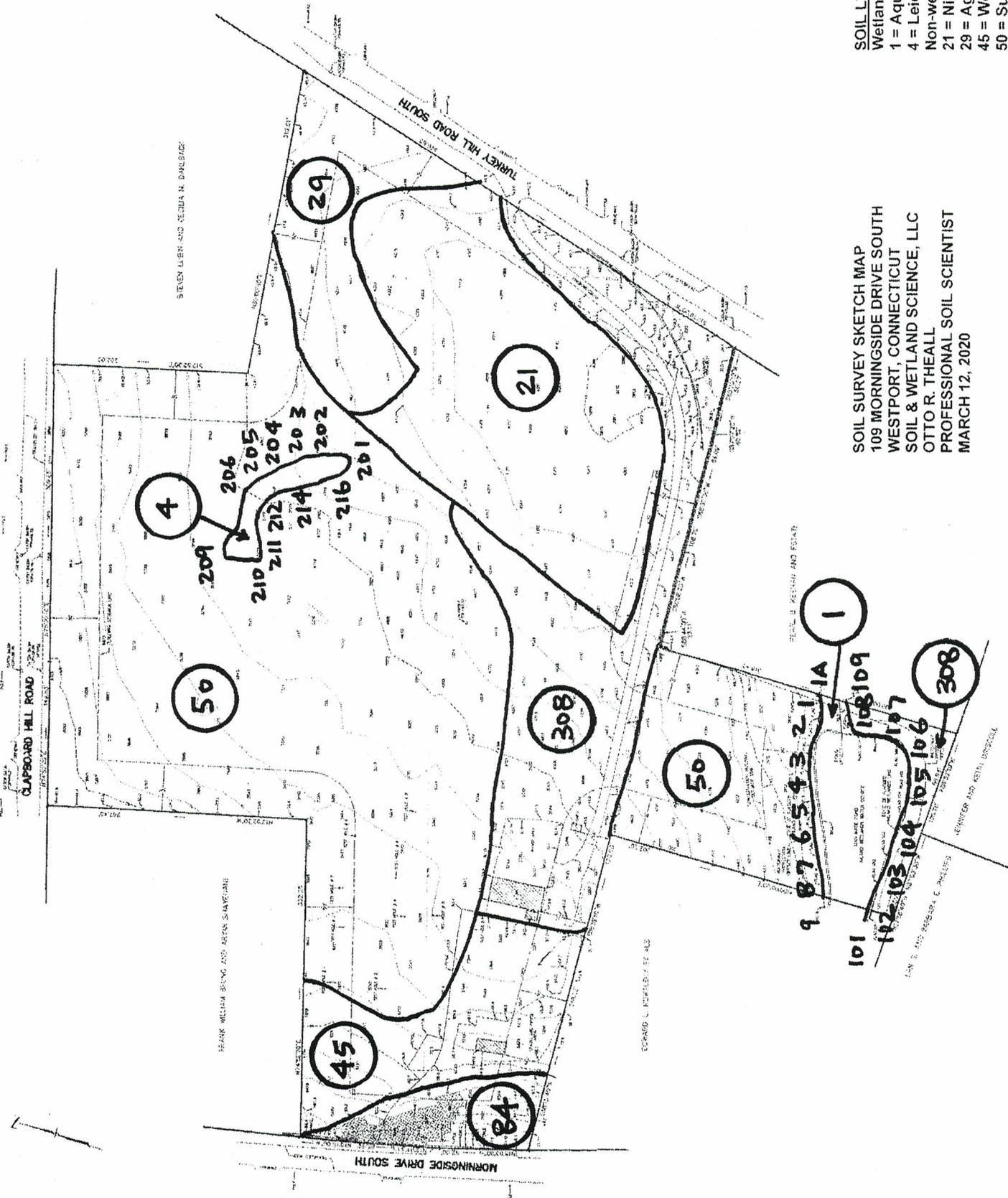
TEST HOLE V (MODERATELY WELL-DRAINED)

<u>DEPTH</u>	<u>HORIZON</u>	<u>COLOR</u>	<u>TEXTURE</u>	<u>COMMENTS</u>
00-14"	A	10YR 3/3	silt loam	no mottles
14-20"	Bw	10YR 4/4	silt loam	c2d 10YR 4/6 mottles no groundwater

Respectfully submitted:



Otto R. Theall
Professional Soil Scientist

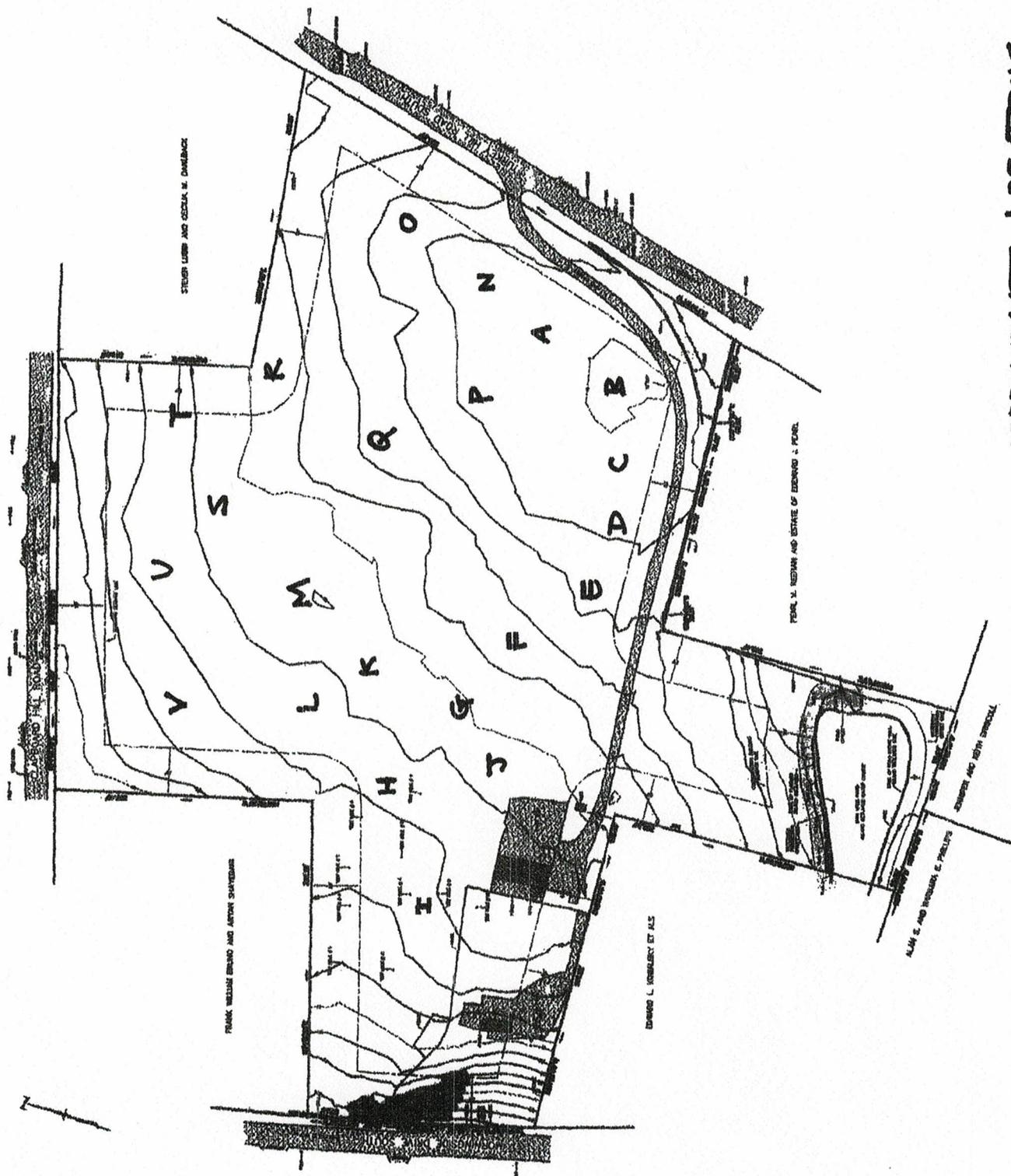


STEVEN LIEN AND REGINA M. DARLADAY

SOIL SURVEY SKETCH MAP
 109 MORNINGSIDE DRIVE SOUTH
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SOIL LEGEND:
 Wetland Soils:
 1 = Aquents
 4 = Leicester fine sandy loam
 Non-wetland Soils:
 21 = Ninigret and Tisbury
 29 = Agawam fine sandy loam
 45 = Woodbridge fine sandy loam
 84 = Sutton fine sandy loam
 85 = Paxton & Montauk f. s. loams
 308 = Urdortheims, smoothed





APPROXIMATE LOCATIONS
 OF DEEP TEST PITS 7/16/19
 SDIL + WETLAND SCIENCE, LLC