

July 14, 2021

Mr. Dean Fiske
Dean Fiske Strathmore Holdings, LLC
P.O. Box 743
Cheshire, CT 06410

**Re: Wetland Delineation
East Mitchell Avenue Residential Development
Lots 2, 261, 269, 270, and 271 East Mitchell Avenue
Cheshire, Connecticut
SLR #141.15841.00001.0090**

Dear Mr. Fiske:

On October 18, 2019, Peter Shea, Licensed Environmental Professional (LEP) and Registered Soil Scientist (RSS) with SLR International Corporation, completed a wetland delineation of five parcels at the end of East Mitchell Avenue in Cheshire, Connecticut. The parcels are identified by the town's assessor mapping as Lots 2, 261, 269, 270, and 271 with a combined land area of 5.728 acres (the subject property or "Site") (Figure 1). The wetland delineation was completed to support the local permitting process of the proposed development.

In general, the topography of the Site slopes easterly from 230 feet (ft) above mean sea level (msl) in the western edge of the property to approximately 190 ft above msl in the northeast portion of the property. Most of the Site is forested, with a single-family residential dwelling and former woodshed present in the eastern portion of the property. An access driveway is located at the southeast end of East Mitchell Drive. This driveway provides access to the southern abutting residential property.

Field Method

Inland wetlands and watercourses on the project site were delineated in accordance with the regulations of the Town of Cheshire, Connecticut, and the State of Connecticut Inlands Wetlands and Watercourses Act, CGS 22a-36 through 45. Regulated wetland areas consist of any of the soil types designated by the National Cooperative Soil Survey as poorly drained, very poorly drained, alluvial, or floodplain. Regulated watercourses consist of rivers; streams; brooks, waterways; lakes; ponds; marshes; swamps; bogs; and all other bodies of water, natural or artificial, vernal or intermittent, public or private, not regulated pursuant to Sections 22a-28 to 22a-35 inclusive (tidal wetlands).

Weather conditions were sunny with an air temperature of approximately 50°F. Site conditions were suitable for wetland delineation work.

Soils were examined using a Dutch auger to help determine hydric or nonhydric soil characteristics. Geospatial data was accessed via the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) web soil survey mapping. Figure 2 depicts the soil survey mapping overlaid onto a 2019 aerial image provided by the Connecticut Department of Energy & Environmental Protection (CTDEEP). The following soil units were identified for the Site:

- Yalesville fine sandy loam,
- Ellington silt loam,
- Rippowam fine sandy loam,
- Udorthents-Urban land complex.

Findings

Based on the field investigation, the soils present at the Site are consistent with the NRCS mapped soil series. Most of the Site is underlain by the Yalesville fine sandy loam. This soil is described by NRCS as a well-drained sandy loam often located in areas that are nearly level to a moderately steep slope. The northeastern portion of the Site is mapped as Ellington and Rippowam soils, which are finer grained soils compared to the Yalesville. The Ellington series is defined as moderately well-drained soils formed in loamy over sandy and gravelly glacial outwash. The Rippowam series is described as very deep, poorly drained loamy soils formed in alluvial sediment. They are nearly level soils on floodplains subject to frequent flooding.

The only discrepancy observed at the Site was the limit of the Rippowam soils mapped in the northeastern portion of the property and along the eastern property boundary. Based on the field investigation and assessment of soils along the eastern slope, the soils encountered were more consistent with the Yalesville series as a fine sandy loam. Based on the topographic position, the mapped Rippowam series is associated with the floodplain of Honeypot Brook and was consistent with the toe of slope along the eastern and southern property boundaries. This is coincident with the wetland boundary mapped along this area, as depicted on Figures 2 and 3.

Two wetland systems were observed at the site, as shown on Figures 2 and 3.

The first wetland system consists of a perennial watercourse located in the southwestern portion of the Site flowing easterly and eventually discharging to Honeypot Brook and associated palustrine emergent (PEM) wetland on the south side of the watercourse. This wetland area is represented on the Site drawings by flags W-1 through W-6 for the PEM wetland, OHW-1 through OHW-11 representing the ordinary high-

water (OHW) mark along on the north side of the watercourse, and OHW-1a through OHW-8a along the south side of the watercourse.

The second wetland system is associated with the riparian zone (palustrine forested wetland) of Honeypot Brook, which is in the southeastern corner of the property and off site to the east. The wetland system is represented on the site drawings by flags Wa-1 through Wa-11. In addition, an intermittent watercourse (IWC) was identified that conveys flow from overland runoff from the surrounding upland areas to Honeypot Brook. The IWC centerline is represented by flags IWC to IWC-6 on the site drawings.

Wetland Descriptions

Wetland System 1 – Unnamed Perennial Watercourse

The unnamed perennial watercourse originates from a 36-inch flared end concrete culvert located just off site in the northwestern corner of the property. The culvert likely originates from Route 10 located west of the site and discharges water into a defined channel that is approximately 5 feet wide with a substrate consisting of sand and gravel. Sediment was observed at the point of discharge and along the channel through the site including anthropogenic debris along its stream banks (i.e., plastic bottles, cans, and other household debris). The watercourse banks were undercut in several locations and eroded. This likely is attributed to the flashy stormwater flows that discharge into the watercourse from the contributing urbanized watershed.

A small PEM wetland is located in the southwestern corner of the Site associated with the floodplain of the unnamed watercourse. Based on field observations, the soil would be classified as fluvaquent. Fluvaquent soils are defined as disturbed soils that are deposited as a result of frequent flooding and can have drainage class ranging from moderately well drained to somewhat poorly drained to poorly drained soils. The vegetation in this area is dominated by Japanese knotweed (*Fallopia japonica*).

The overstory canopy of the watercourse and adjacent upland forest within the Site consists of white ash (*Fraxinus americana*), shagbark hickory (*Carya ovata*), Norway spruce (*Picea abies*), sugar maple (*Acer saccharum*), black cherry (*Prunus serotina*), and pin cherry (*Prunus pensylvanica*). The understory mostly comprises Japanese knotweed (*Fallopia japonica*) and to a lesser extent multiflora rose (*Rosa multiflora*) and Morrow's honeysuckle (*Lonicera morrowii*).

Wetlands and watercourses perform certain functions and possess values based on wetland/watercourse type, hydrologic connectivity, habitat, and a variety of other measured parameters. Based on our observations, this urbanized watercourse provides limited functions and values due to its flashy flow regime, urbanized watershed, low fish and macroinvertebrate habitat, and close proximity to development. However, principal functions include production export (allochthonous materials), sediment retention, and non-wetland dependent urban wildlife habitat.

Wetland System 2 – Honeypot Brook Watercourse and Associated Floodplain Wetland (Palustrine Forested [PFO] Wetland)

Honeypot Brook (a perennial watercourse) is located off-site on the abutting parcel to the south and east. This wetland system consists of the floodplain and riparian zone of Honeypot Brook along the southeastern corner of the Site and just off site along the eastern property boundary. The soils within the wetland are hydric, mapped as Rippowam series. The wetland boundary was flagged and delineated off site in an effort to determine the extent of upland review area for the development. The western wetland boundary is consistent with the toe of slope along the edge of the property.

An IWC is located in the northeastern portion of the property that conveys runoff from the surrounding upland area to the wetland system associated with Honeypot Brook. A clearly defined channel and sediment deposition were observed to include the IWC as a regulated area; however, the soils within the channel were nonhydric based on field observations. No wetland vegetation was present within the IWC or surrounding area.

The overstory canopy on the subject property consists of white ash (*Fraxinus americana*), shagbark hickory (*Carya ovata*), Norway spruce (*Picea abies*), sugar maple (*Acer saccharum*), black cherry (*Prunus serotina*), and pin cherry (*Prunus pensylvanica*). The understory mostly comprises multiflora rose (*Rosa multiflora*) and Morrow's honeysuckle (*Lonicera morrowii*).

Wetland vegetation was limited to the off-site wetland withing the floodplain of Honeypot Brook. The overstory canopy of the floodplain consisted of red maple (*Acer rubrum*), yellow birch (*Betula alleghaniensis*), and silky dogwood (*Swida amomum*). The understory within the wetland consisted of winterberry (*Ilex laevigata*), skunk-cabbage (*Symplocarpus foetidus*), and tussock sedge (*Carex stricta*).

The wetland system associated with Honeypot Brook and its associated PFO wetland area perform several principal functions and values, which include production export, groundwater recharge/discharge, shoreline stabilization, wildlife habitat, fish habitat, and flood flow alteration.

Conclusion

Based on the assessment of the Site, there are two primary wetlands located within the project boundary. Both wetland areas are located along the property boundary and are associated with perennial watercourses. An IWC was mapped in the northeastern portion of the Site that conveys flow from the upland areas to the wetland associated with Honeypot Brook located to the east of the Site. If you have any questions regarding my delineation and/or the information presented within this report please do not hesitate to call (203) 271-1773 or e-mail me at pshea@slrconsulting.com.

Sincerely,

SLR International Corporation



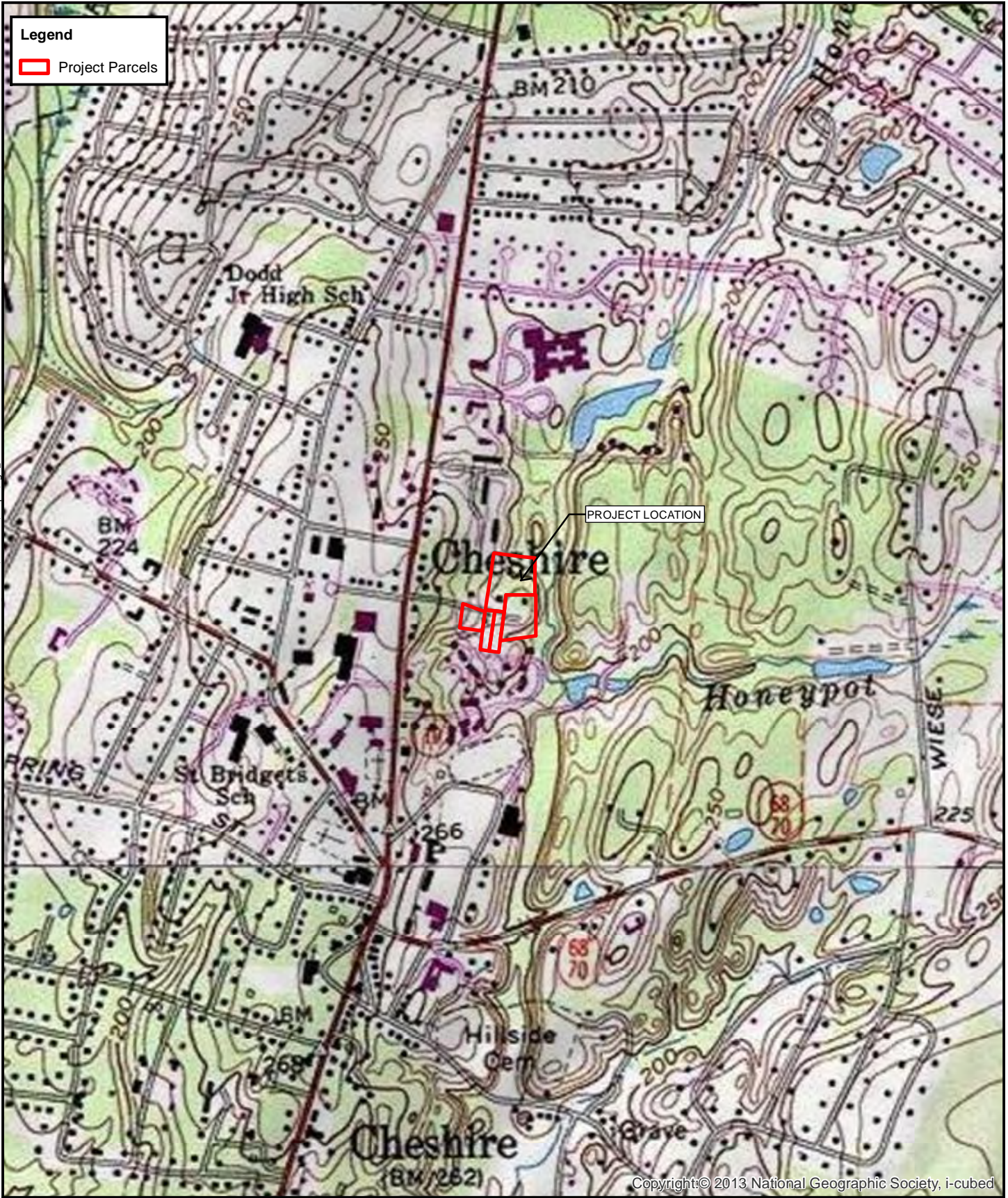
Peter Shea, LEP, RSS
Senior Environmental Scientist



Matthew J. Sanford, MS, PWS, RSS
US Manager of Ecology

Attachments

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99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

SITE LOCATION MAP

EAST MITCHELL AVENUE
SOIL REPORT
EAST MITCHELL AVENUE
CHESHIRE, CONNECTICUT



0 1,000
Feet

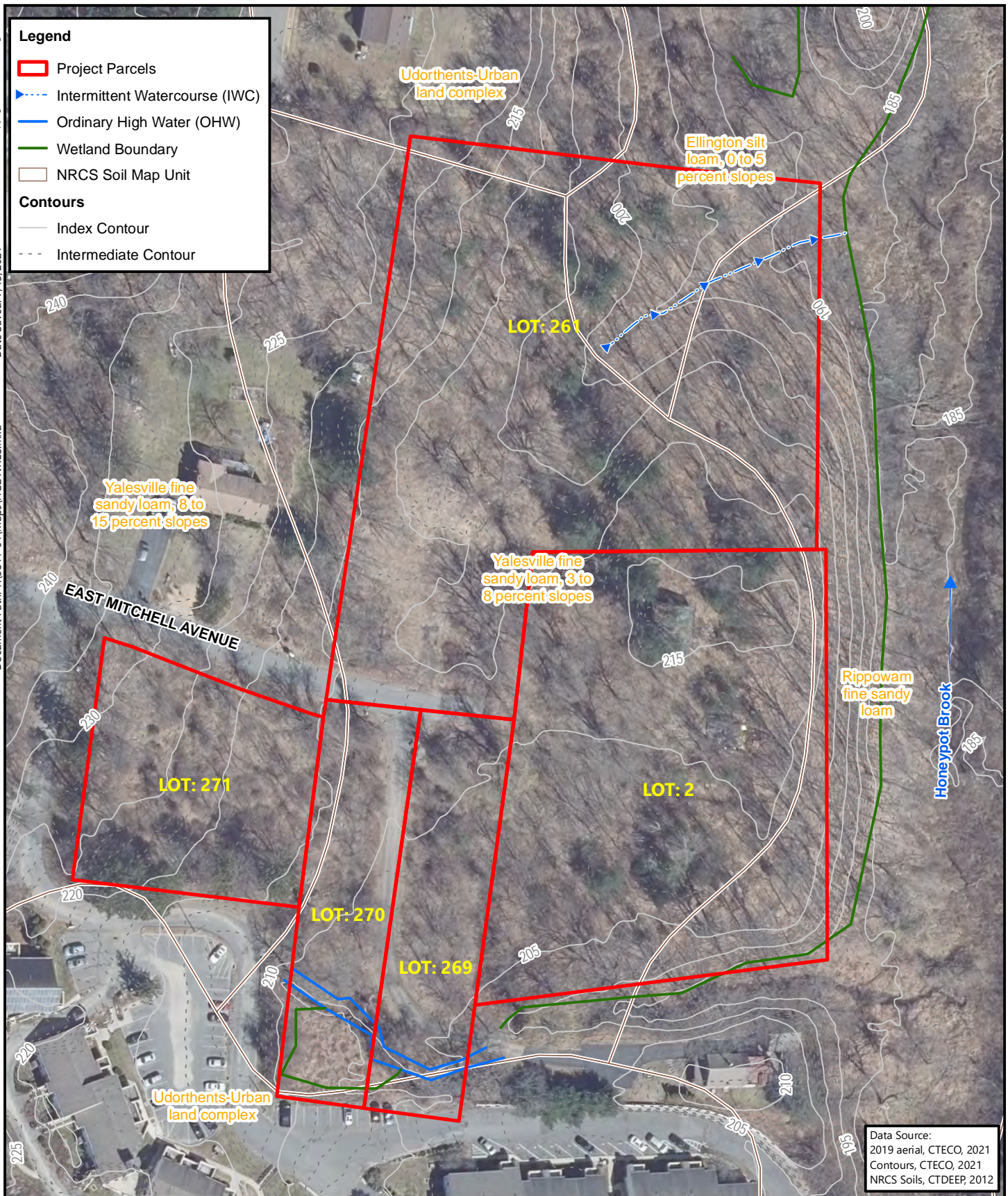
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DATE 7/13/2021

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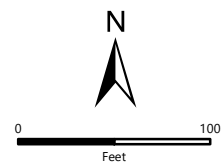
FIG. 1



99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

NRCS SOIL SURVEY MAPPING

EAST MITCHELL AVENUE
SOIL REPORT
EAST MITCHELL AVENUE
CHESHIRE, CONNECTICUT



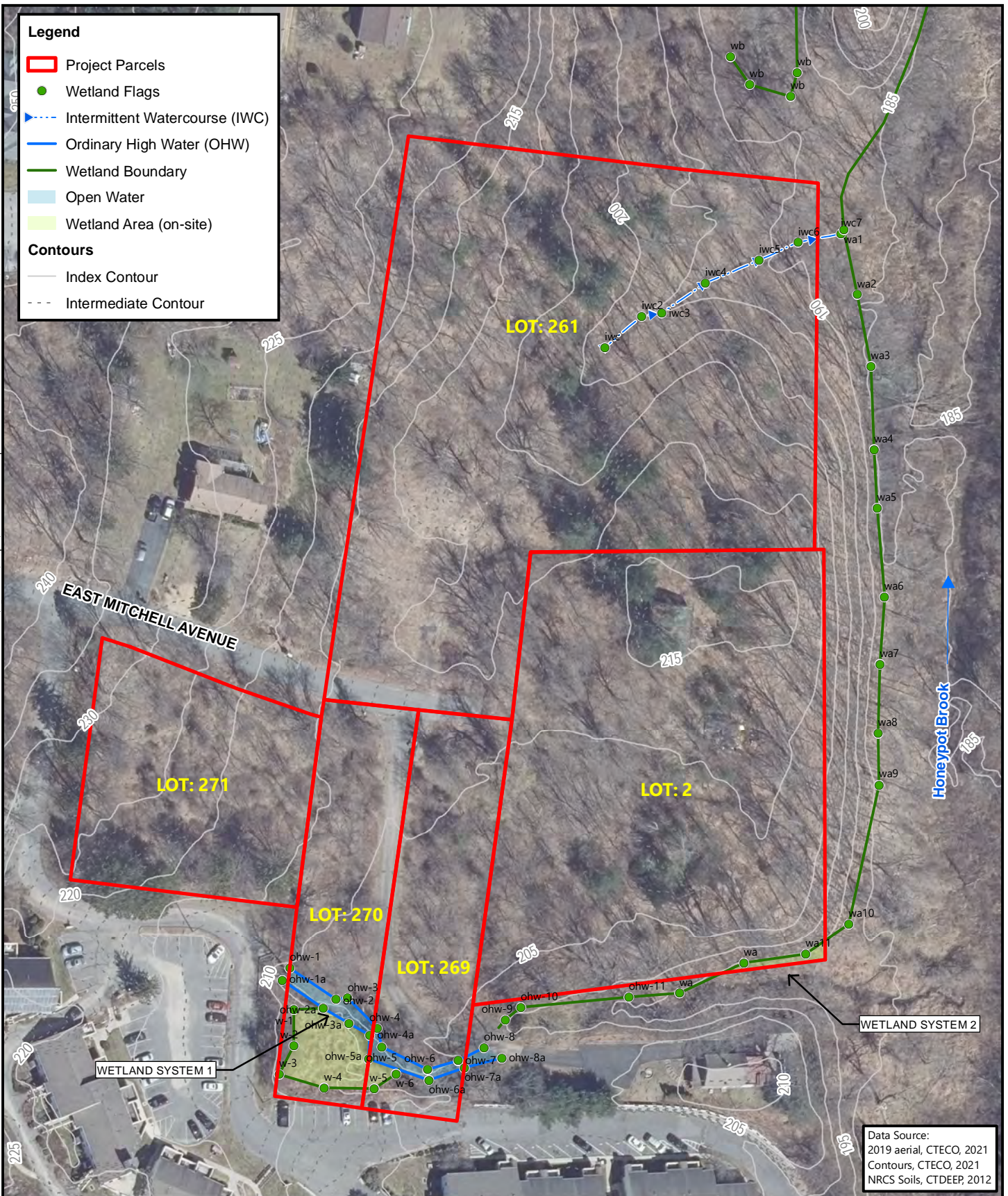
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FIG. 2



99 REALTY DRIVE
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WETLAND DELINEATION

EAST MITCHELL AVENUE
SOIL REPORT
EAST MITCHELL AVENUE
CHESHIRE, CONNECTICUT



0 100
Feet

SCALE 1" = 100'

DATE 7/13/2021

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FIG. 3