SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

545 Highland Avenue * Route 10 * Cheshire * Connecticut * 06410 * (203) 272-7837
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WETLANDS/WATERCOURSES AND SOIL REPORT

To: URS Corporation
Attn: Alitz Abadjian
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067

SSES Job No: 2006-112-CT-MCH-1
Client Job No: 36915454.00001
Site Inspection Date: March 8, 2006

PROJECT TITLE AND LOCATION: Proposed Optasite Tower, 1027 Middle Turnpike East, Manchester, CT

IDENTIFICATION OF WETLANDS AND WATERCOURSES RESOURCES

WETLANDS AND WATERCOURSES PRESENT ON PROPERTY: Yes XX No ____

Wetlands: Inland Wetlands XX **Watercourses:** Streams XX
Tidal Wetlands ____ Waterbodies ____
Remarks:

VEGETATION COMMUNITIES PRESENT IN WETLANDS

Forest XX Sapling/Shrub XX Wet Meadow ____ Marsh XX Field/Lawn ____

SOIL MOISTURE CONDITION

Dry ____
Moist XX
Wet XX

WINTER CONDITIONS

Frost Depth: 0-4 inches
Snow Depth: 0-2 inches

The classification system of the National Cooperative Soil Survey, USDA, Natural Resources Conservation Service and the State Soil Legend were used in this investigation. The investigation was conducted by the undersigned Registered Soil Scientist. A sketch map showing wetland boundaries and the numbering sequence of wetland markers, watercourses and soil types in both wetland and non-wetlands are included with this report. After the wetland boundary and/or watercourse flags have been located/plotted by the surveyor, it is recommended that a copy of the survey map be sent to our firm for review. All wetland boundary lines established by the undersigned Registered Soil Scientist are subject to change until officially adopted by local, state or federal regulatory agencies.

Respectfully Submitted by

SOIL SCIENCE AND ENVIRONMENTAL SERVICES, INC.

Thomas W. Pietras

Thomas W. Pietras
Registered Professional Soil Scientist
Professional Wetland Scientist

See attached pages

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NUMBERING SEQUENCE OF WETLAND BOUNDARY LINE MARKERS:

1 THRU 12 13 THRU 22

SOILS SECTION:

Soil Legend: State Soil Number/County Soil Symbol, Soil Series Name, Taxonomic Class & Brief Description.

WETLAND SOILS

15/Se Scarboro muck (Histic Humaquepts) - This is a deep, very poorly drained soil with a thin mucky surface overlying sandy and gravelly outwash. The outwash was derived from schist, gneiss and granite. Outwash soils occur in valleys, outwash plains and terraces.

17/Pm Timakwa and Natchaug soils (Terric Medisaprists) – These are deep, very poorly drained, peats and mucks, organic soils overlying either sandy or loamy subsoil. Depth of the peats and mucks ranges from 15 to 50 inches. These soils were formerly mapped in Connecticut as Muck, shallow.

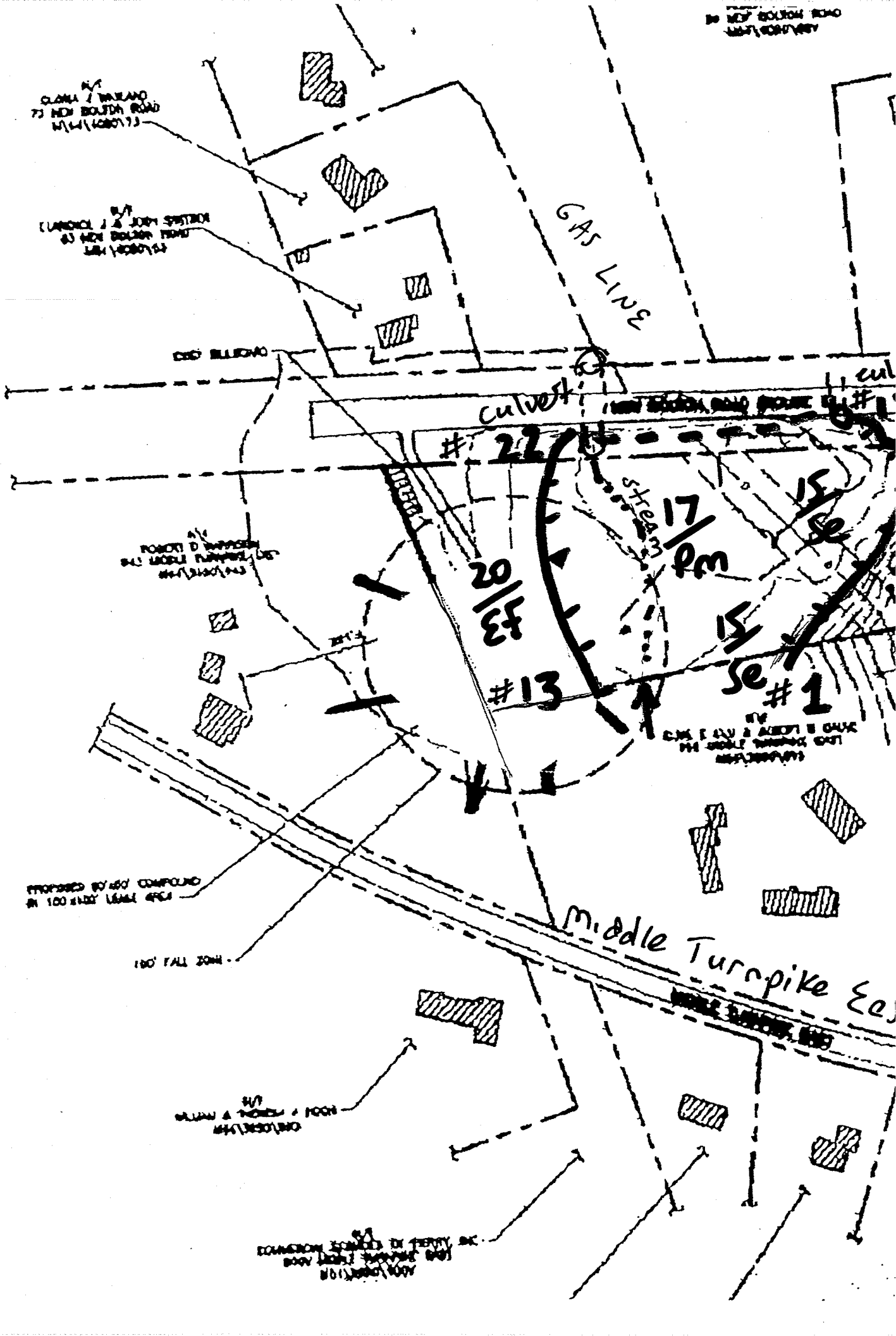
NON-WETLAND SOILS

20/Ef Ellington silt loam (Aquic Dystrudepts) – This is a deep, moderately well drained, friable, reddish-colored, loamy soil developed over sandy and gravelly outwash derived from sandstone, shale and basalt. Outwash soils occur in valleys, outwash plains and terraces.

33/Hf Hartford sandy loam (Typic Dystrudepts) – This is a deep, somewhat excessively drained, friable, reddish-colored, sandy textured soil developed over sandy and gravelly outwash derived from sandstone, shale and basalt. Outwash soils occur in valleys, outwash plains and terraces.

77/Ht Cheshire-Holyoke complex (Typic & Lithic Dystrudepts) - These are deep (> 5 feet) and shallow to bedrock (10-20 inches), well drained and somewhat excessively drained, friable, reddish-brown, coarse-loamy textured, glacial till soils derived from sandstone, shale and basalt. The Cheshire-Holyoke complex occurs on glaciated plains, hills and ridges.

Notes: The wetland occurs in a low-lying, nearly level portion of the property. A small stream drains northerly though the wetland to a culvert at New Bolton Road. The wetland primarily supports forested swamp vegetation that includes Phragmites marsh and sapling/shrub swamp in the gas line R.O.W. and near New Bolton Road.


GAS LINE
culvert
#22
stream 3
17
fm
20
ef
#13
15
se
#1
Middle Turnpike Ea

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DEFINITIONS AND METHODOLOGY
DEFINITIONS OF STATE REGULATED WETLANDS & WATERCOURSES

INLAND WETLANDS AND WATERCOURSES: According to Section 22a-38 of the State of Connecticut Inland Wetlands and Watercourses Act, Wetlands "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture." Watercourses "means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private. Intermittent watercourses shall 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."

TIDAL WETLANDS: According to Connecticut General Statutes, Sec. 22a-29 (2) of the Tidal Wetlands Act, Tidal Wetlands are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all of the following:" (list of those plants common to tidal marshes, brackish wetlands and other wetlands which are subject to tidal influence).

METHODOLOGY FOR IDENTIFICATION OF SOILS, WETLANDS & WATERCOURSES

1) **SOILS IDENTIFICATION**: Soils are investigated by digging test holes with a spade and auger. Test holes are typically dug to depths of between 15 and 40 inches. Based on soil features, including coloration patterns, texture and depths to restrictive layers, the soils are identified by soil series utilizing the classification system of the National Cooperative Soil Survey. The soil map series correspond with the State Soil Map Legend established by USDA, NRCS in the State of Connecticut Soil Survey. For further information about soils refer to the NRCS website for CT: www.ct.nrcs.usda.gov

2) **INLAND WETLAND DELINEATION**: Soil test holes and borings are made in selected areas in order to determine the lateral extent of Inland Wetlands. The boundaries of all Inland Wetlands on each project site are delineated with consecutively numbered survey tapes, unless instructed by the client to only map wetland boundaries for planning purposes.

3) **IDENTIFICATION OF WATERCOURSES**: Watercourse locations are sketched onto maps. Often ponds, streams and rivers are already shown on the survey map. If a watercourse is not shown on a survey map, survey tapes are placed along the channel and labeled "Intermittent or Perennial Watercourse."

4) **TIDAL WETLANDS**: Tidal Wetlands are identified based on a predominance of tidal wetland plants and observation of physical markings or water laid deposits resulting from tidal action. Tidal Wetland boundaries are established by locating the upland limits of the "Listed Plants" from the Tidal Wetlands Act to the extent that these plants reflect inundation by tides.