

1930 Constant Avenue
Lawrence, KS 66047-3724
January 28, 2008

Chirs Cox, P. E.
Schwab-Eaton, P. A.
1125 Garden Way
Manhattan, KS 66502

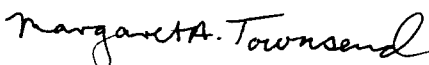
Dear Mr. Cox:

I was asked to review the Marshall County plans for a construction demolition landfill. The soils in the area appear to be mostly Pawnee clay and Pawnee clay loam. If the KDHE specifications for this type of landfill include the need for a liner these soils may be adequate. However, I would suggest that you contact the NRCS for further information about these soils.

The topographic map for the site indicates that stream channels are present at the northern and southeastern edges of the site. This may be of concern in terms of soil changes, stability, and possible erosion issues at the site. The water table in section 21 to the north ranges from 37 to 48 feet in depth. With the stream beds occurring at the north and southeastern edges of the site it may be worth evaluating the potential for ground- and surface-water interaction or possible springs in the area just as a safety precaution to prevent possible future water contamination. Based on the limited information provided to me I do not see any reason why the project should not proceed as long as the above comments are evaluated.

The above comments are based on regional geologic conditions and limited information available to the KGS at the time of writing and cannot be used in substitute for a detailed site characterization. Other geologic conditions, not discussed here, or for which the KGS has no knowledge, may affect the viability or safe operation of this facility or property. Geotechnical engineering and design are outside the purview of the KGS. It is the responsibility of the applicant to produce any detailed site characterizations, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,


Margaret A. Townsend
Geohydrology Section

Schwab-Eaton, P.A.

CIVIL ENGINEERS • LAND SURVEYORS • LANDSCAPE ARCHITECTS



January 14, 2008

Kansas Geological Survey
University of Kansas
1930 Constant Avenue
Lawrence, KS 66047

Dear Sir:

Marshall County Kansas is proposing to construct a new construction demolition landfill on the 40-acre site located immediately south of their current transfer station and CD disposal area. I have included herewith a USGS map indicating the approximate location of the proposed site. The objective of the project is to provide adequate disposal area for construction demolition debris and eliminate this material from the municipal solid waste stream. Should your agency require additional information or wish to make a comment regarding the proposed CD landfill construction, please respond to our office in writing by February 15th, 2007.

The proposed CD landfill will be located in what is currently agricultural ground. The new landfill will be constructed to a depth of approximately 15' at the deepest location. The material that is excavated from the site will be used in the operation as both intermittent and final cover over the CD landfill.

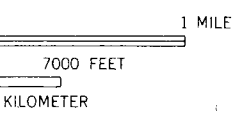
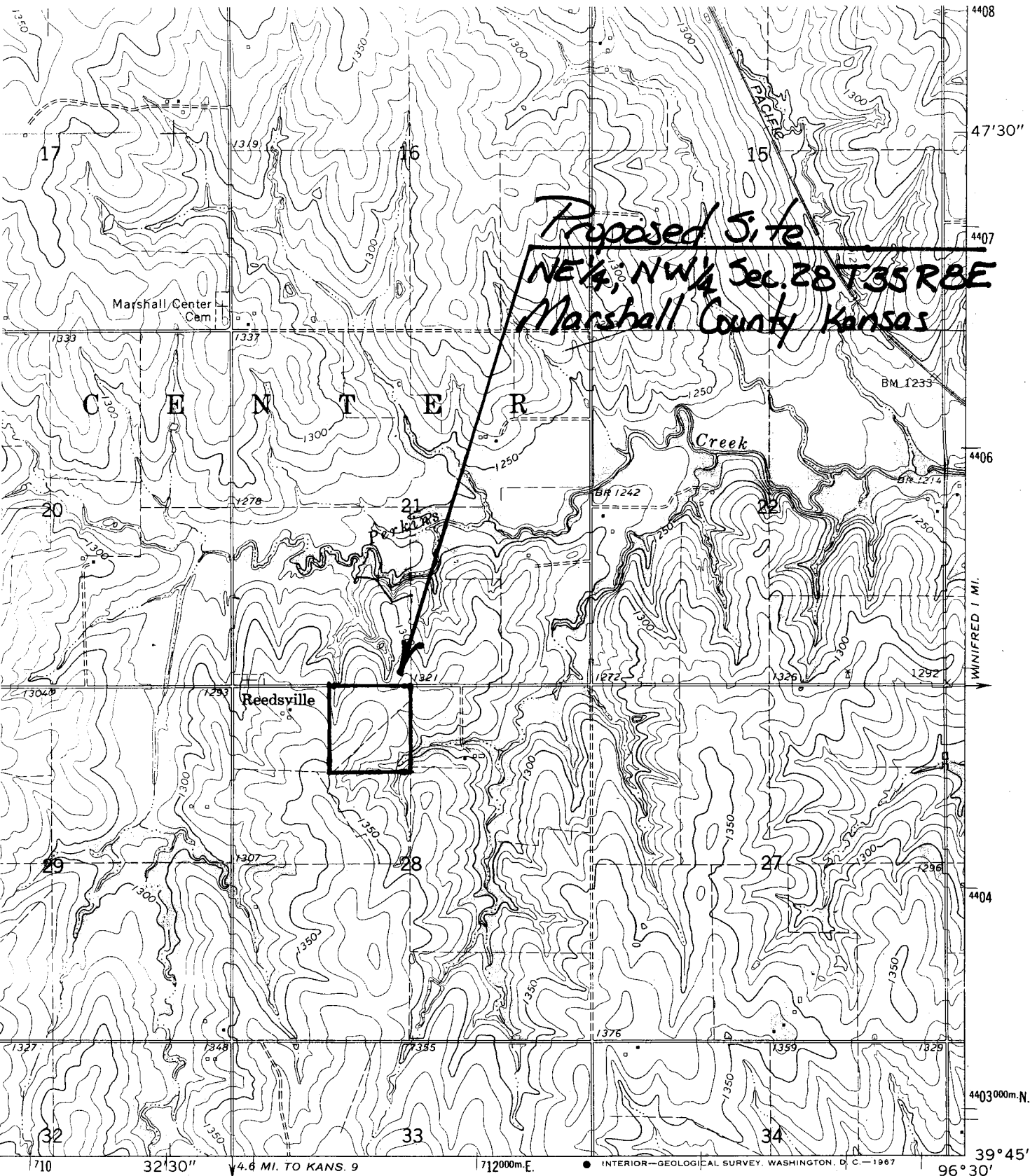
Sincerely,

SCHWAB-EATON, P.A.

A handwritten signature in cursive script that reads "Chris Cox".

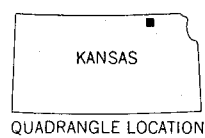
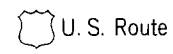
Chris Cox, P.E.

Enclosure
cc/akl



ROAD CLASSIFICATION

Heavy-duty ————— Light-duty - - - - -
Unimproved dirt =====



HOME, KANS.
N3945—W9630/7.5

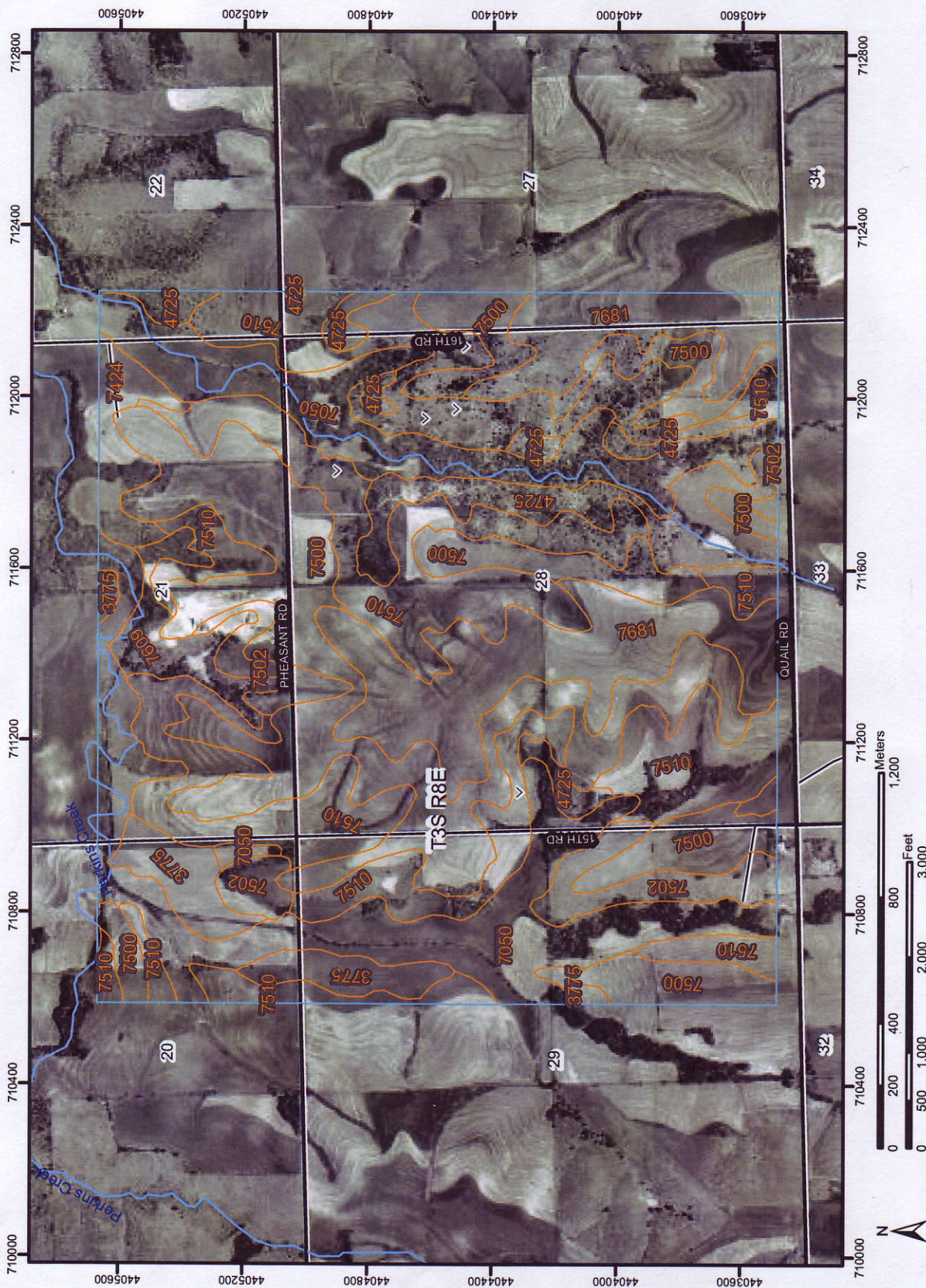
WASHINGTON, D. C. 20242

66044

ON REQUEST

1966

Soil Map—Marshall County, Kansas
(marshall county cd landfill)



MAP LEGEND

	Area of Interest (AOI)		Soil Map Units
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MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 14N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Marshall County, Kansas
Survey Area Data: Version 6, Dec 28, 2007

Date(s) aerial images were photographed: 10/16/1991

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Marshall County, Kansas (KS117)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3775	Muir silt loam, rarely flooded	41.5	3.4%
4725	Kipson-Sogn complex, 5 to 30 percent slopes	76.8	6.3%
7050	Kennebec silt loam, occasionally flooded	220.5	18.0%
7424	Morrill clay loam, 3 to 7 percent slopes, eroded	21.7	1.8%
7500	Pawnee clay loam, 1 to 3 percent slopes	297.1	24.2%
7502	Pawnee clay loam, 3 to 6 percent slopes	51.6	4.2%
7510	Pawnee clay, 3 to 7 percent slopes, eroded	342.2	27.9%
7609	Steinauer-Shelby clay loams, 10 to 14 percent slopes	25.1	2.1%
7681	Wymore silty clay loam, 1 to 3 percent slopes	149.1	12.2%
Totals for Area of Interest (AOI)		1,225.7	100.0%