KU KANSAS GEOLOGICAL SURVEY
The University of Kansas

1930 Constant Avenue
Lawrence, KS 66047-3724
December 31, 2008

Randy Alewine, P. E.
Senior Project Manager
The Stinson Environmental Group
9948 W. 87th Street, Suite A-1
Overland Park, KS 66212

Dear Mr. Alewine:

As Dr. Greg Ohlmacher is no longer at the Kansas Geological Survey, I was asked to review the plans for a construction demolition landfill at Easton, KS by Larkin Excavating company. The site is an expansion on land currantly owned by Larkin and operated as a C&D landfill. The soils information from the NRCS indicates that the soils are primarily Osaka silty clay loams, Rosendale-Bendena silty clay loams, and the Wallula-Vinland complex. 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 ponds are located in the area of proposed expansion. This may be of concern in terms of soil changes, stability, and possible erosion issues at the site. Disruption or removal of the pond sediment may permit contamination of the stream to the west of the site because of oxidation of sediment removed from depth in the pond and runoff of potential contaminants into surface water. I would suggest chemical testing of the pond sediment to determine if measurable concentrations of phophate, nitrate, ammonium, or other elements such as lead (from past use of leaded gasoline in the area), or other heavy metals that may be an issue during disposal of the sediment.

I do not know how you are planning to dispose of the pond sediment but the chemical testing should assist you in making a correct determination of the appropriate method. I would also consult with KDHE to determine if there are proceedures that are pertinent to this issue.

With the stream bed occurring at the western edge 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

Margaret A. Townsend
Geohydrology Section

The Stinson Environmental Group

November 3, 2008

Mr. Greg Ohlmacher
Associate Scientist
Kansas Geological Survey
1930 Constant Avenue
Parker 102
Lawrence, KS 66047-3726

In Re: Larkin C&D Landfill, Permit No. 563
2.36 Acres Expansion to Phase 1

Gentlemen:

The Larkin C&D Landfill (Larkin) is applying to the Kansas Department of Health and Environment to expand its existing C&D Landfill from 16.97 acres to 19.33 acres. The attached maps show the location and modification to Phase 1 that Larkin is requesting. The expansion will occur within property Larkin already owns and no additional property is needed for this expansion. We are requesting your review and comments regarding this proposed expansion.

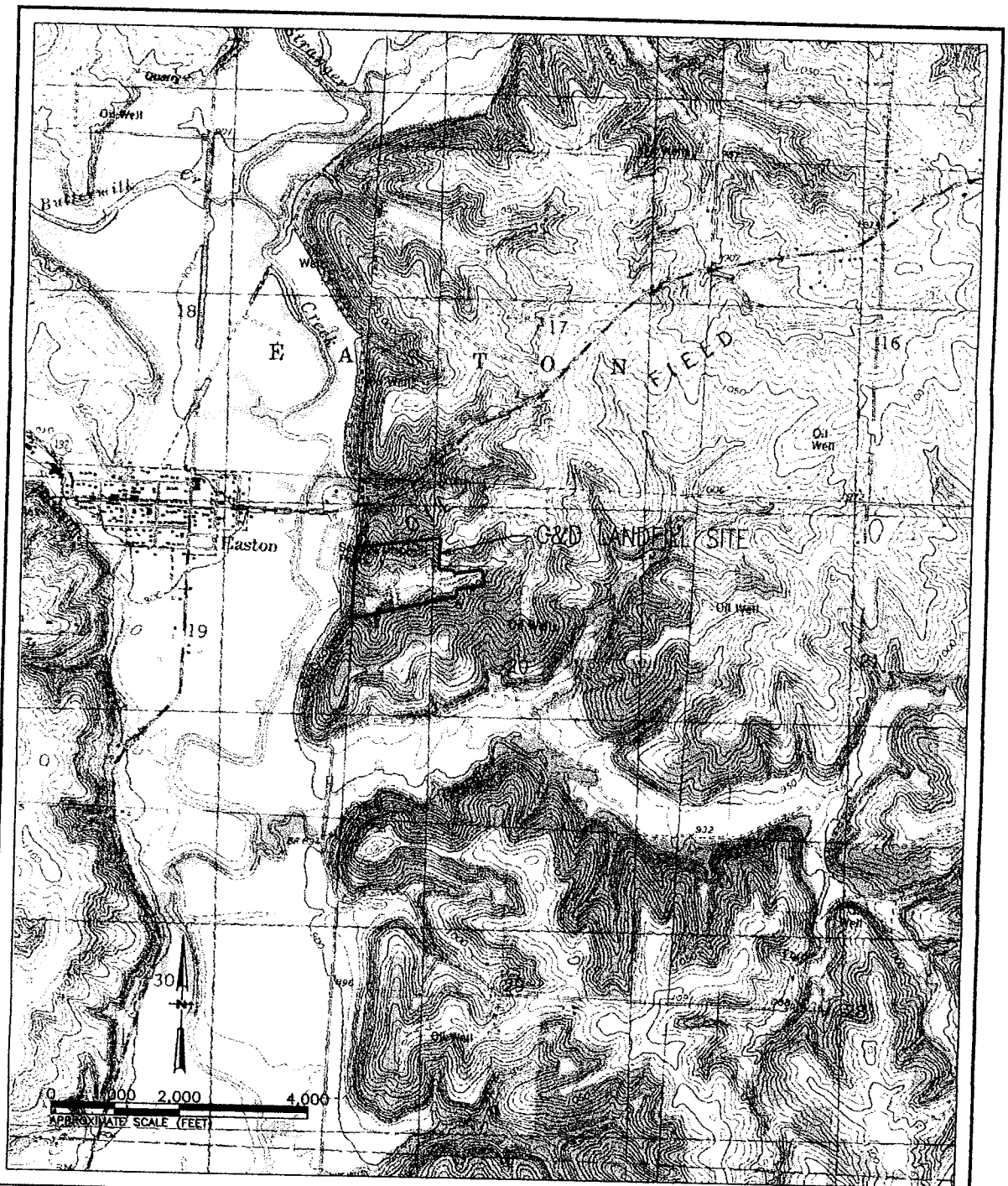
Do not hesitate to call if you have any questions.

Sincerely,

Randy Alewine, P.E.
Senior Project Manager

xc: Larkin Excavating, Bruce Bettis

9948 W. 87th Street, Suite A-1, Overland Park, KS 66212
913.495.9990 / 913.648.2077 fax / **the SEG.com**



PROJ.#	4018
DRAWN BY:	BCS
DESIGNED BY:	RA
APPROVED BY:	RS
DATE:	10-6-06

The Stinson Environmental Group L.L.C.
13410-L Santa Fe Trail Drive
Lenexa, Kansas 66215
Ph. 913.495.9990
Fax 913.495.9992

LARKIN EXCAVATING C&D LANDFILL
EASTON, KANSAS
SITE LOCATION MAP

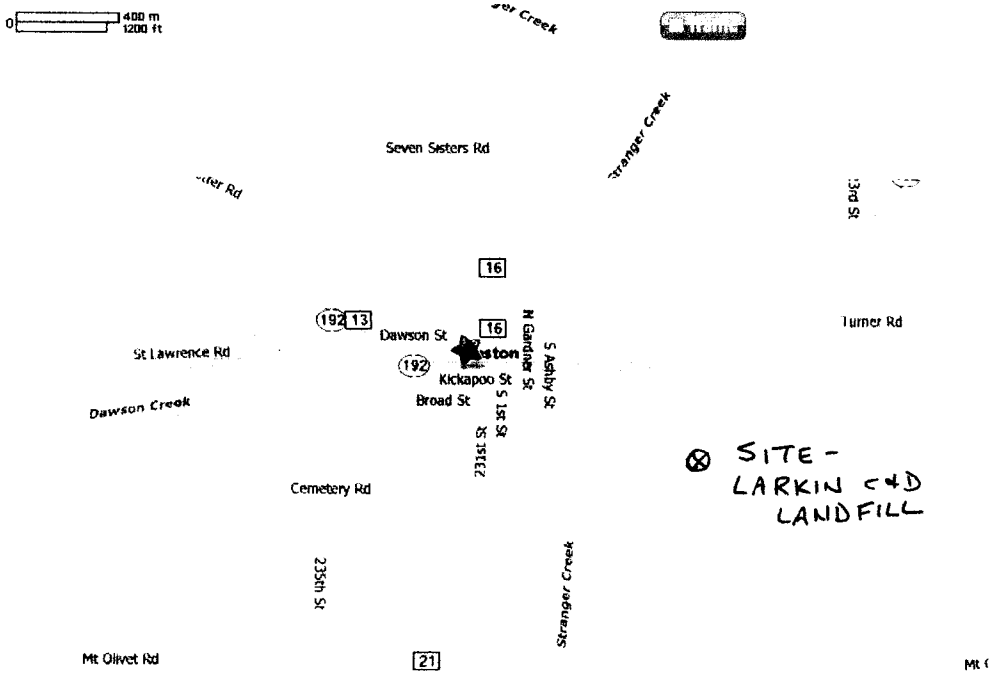
PAGE#

A

MAPQUEST

Sorry! When printing directly from the browser your directions or map may not print correctly. For best results, try clicking the Printer-Friendly button.

Easton, KS



MAPQUEST

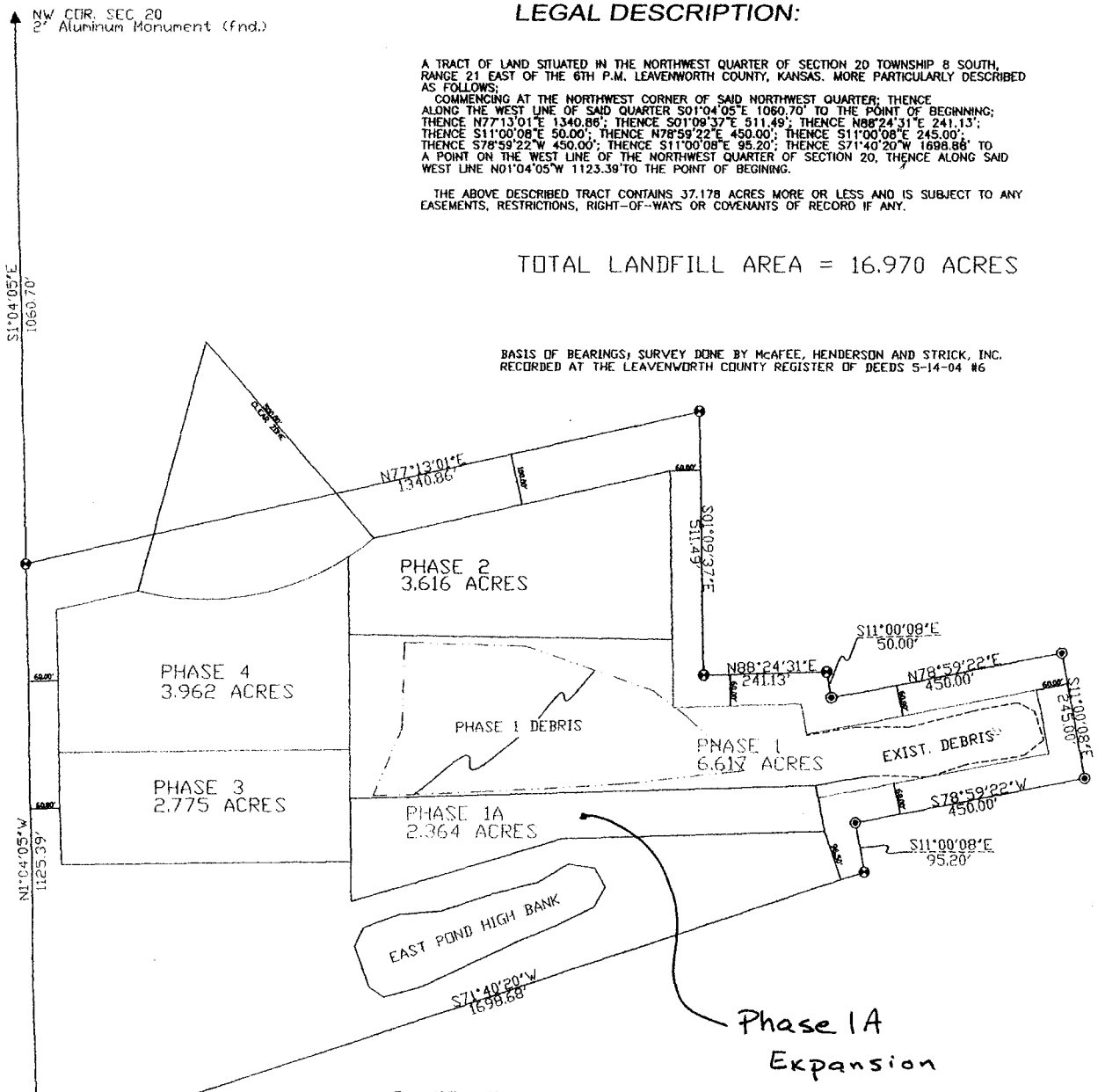
PLAT OF SURVEY

LEGAL DESCRIPTION:

A TRACT OF LAND SITUATED IN THE NORTHWEST QUARTER OF SECTION 20 TOWNSHIP 8 SOUTH, RANGE 21 EAST OF THE 6TH P.M. LEAVENWORTH COUNTY, KANSAS. MORE PARTICULARLY DESCRIBED AS FOLLOWS;
COMMENCING AT THE NORTHWEST CORNER OF SAID NORTHWEST QUARTER; THENCE ALONG THE WEST LINE OF SAID QUARTER S01°04'05"E 1060.70' TO THE POINT OF BEGINNING; THENCE N77°13'01"E 1340.86'; THENCE S01°09'37"E 511.49'; THENCE N88°24'31"E 241.13'; THENCE S11°00'08"E 50.00'; THENCE N78°59'22"E 450.00'; THENCE S11°00'08"E 245.00'; THENCE S78°59'22"W 450.00'; THENCE S11°00'08"E 95.20'; THENCE S71°40'20"W 1698.68' TO A POINT ON THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 20, THENCE ALONG SAID WEST LINE N01°04'05"W 1123.39'TO THE POINT OF BEGINING.

THE ABOVE DESCRIBED TRACT CONTAINS 37.178 ACRES MORE OR LESS AND IS SUBJECT TO ANY EASEMENTS, RESTRICTIONS, RIGHT-OF-WAYS OR COVENANTS OF RECORD IF ANY.

TOTAL LANDFILL AREA = 16.970 ACRES



Certification:

I RANDALL R. KANAK HEREBY CERTIFY THAT THIS SURVEY IS THE TRUE AND ACCURATE RESULTS OF A FIELD SURVEY DONE UNDER MY DIRECT SUPERVISION ON DECEMBER 3 THRU 7, 2007.

RANDALL R. KANAK R.L.S 825

LEGEND :

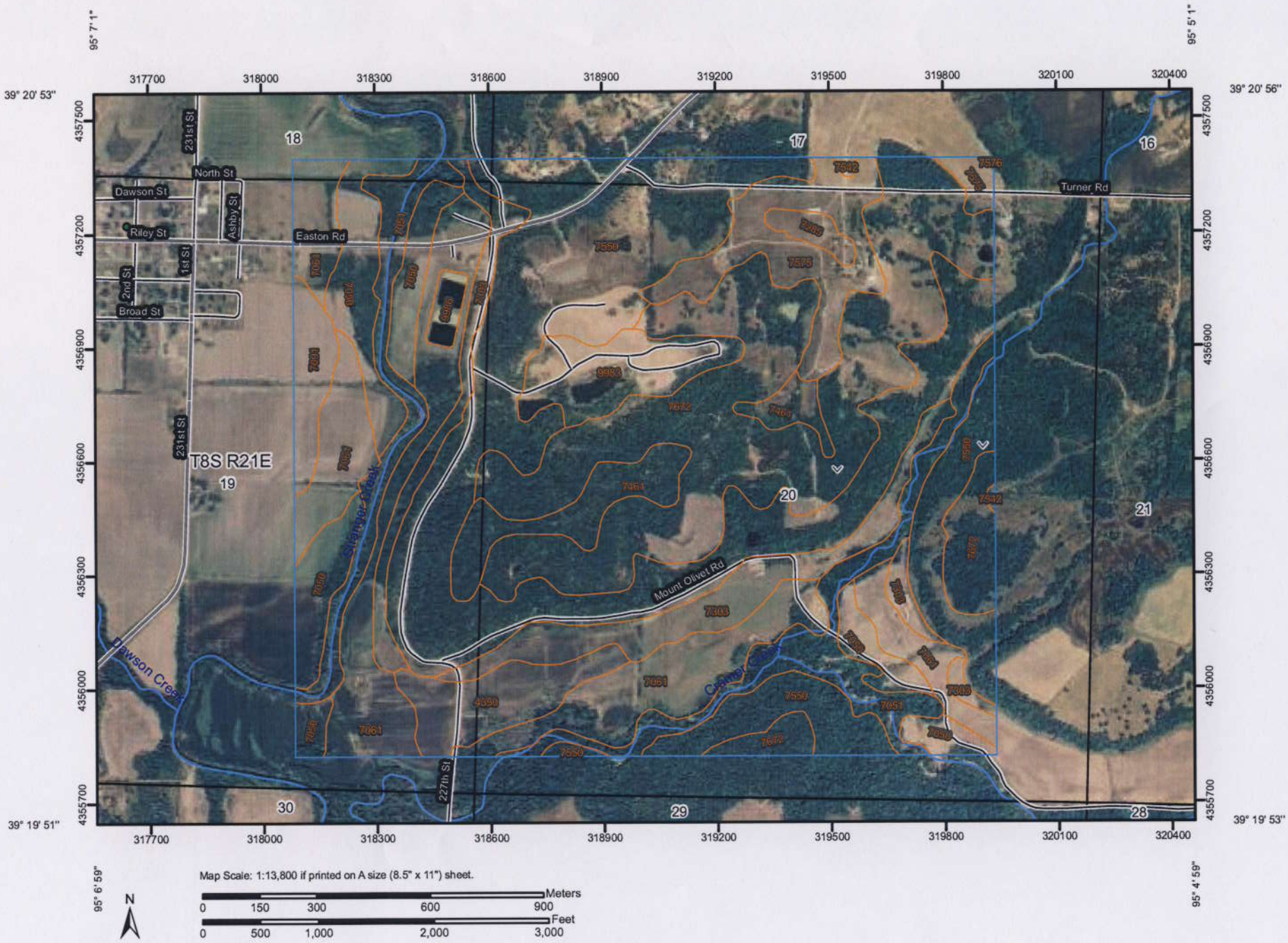
- ⊕ = *Aluminum cap in concrete stamped LV CO c&d Landfill Strick-KSLS 1373 (found)*
- ◉ = *1/2"* 24" REBAR WITH KANAK RLS 825 (found)*

N

SCALE: 1"=200'

REVISED 8-21-08

Soil Map—Leavenworth County, Kansas
(Larkin C&D Landfill)



USDA Natural Resources Conservation Service

Web Soil Survey 2.1
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features
- Cities
- PLSS Township and Range
- PLSS Section

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:13,800 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 15N NAD83

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

Soil Survey Area: Leavenworth County, Kansas
Survey Area Data: Version 3, Dec 8, 2008

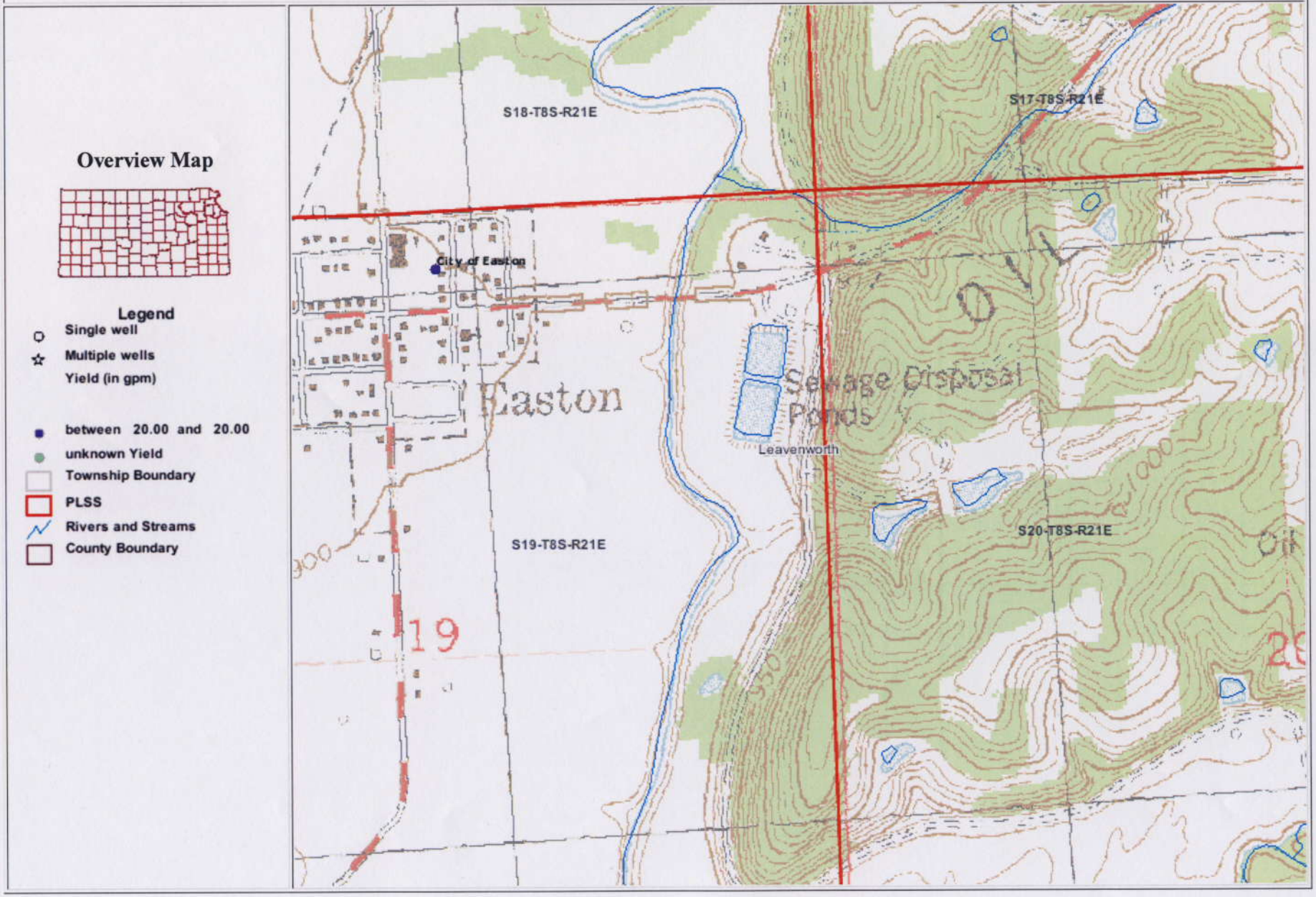
Date(s) aerial images were photographed: 7/1/2006

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

Leavenworth County, Kansas (KS103)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
4350	Chase silty clay loam, rarely flooded	20.0	2.8%
7050	Kennebec silt loam, occasionally flooded	53.1	7.4%
7051	Kennebec silt loam, frequently flooded	52.3	7.3%
7061	Muscotah silty clay loam, occasionally flooded	100.6	14.0%
7091	Wabash silty clay, occasionally flooded	10.8	1.5%
7285	Ladoga silt loam, 3 to 8 percent slopes	4.3	0.6%
7303	Martin silty clay loam, 3 to 7 percent slopes, eroded	48.1	6.7%
7461	Oska silty clay loam, 3 to 8 percent slopes, eroded	23.2	3.2%
7542	Sharpsburg silty clay loam, 4 to 8 percent slopes, eroded	0.9	0.1%
7550	Rosendale-Bendena silty clay loams, 3 to 40 percent slopes	195.3	27.1%
7575	Shelby clay loam, 4 to 8 percent slopes, eroded	34.6	4.8%
7576	Shelby clay loam, 8 to 12 percent slopes, eroded	0.1	0.0%
7672	Wallula-Vinland complex, 5 to 40 percent slopes	150.4	20.9%
9983	Gravel pits and quarries	22.3	3.1%
9986	Miscellaneous water	3.6	0.5%
Totals for Area of Interest		**719.8**	**100.0%**

Kansas WWC5 Well Viewer



Kansas WWC5 Well Viewer