

ILLINOIS SOIL CLASSIFIERS  
ASSOCIATION

SUMMER MEETING  
FIELD TRIP

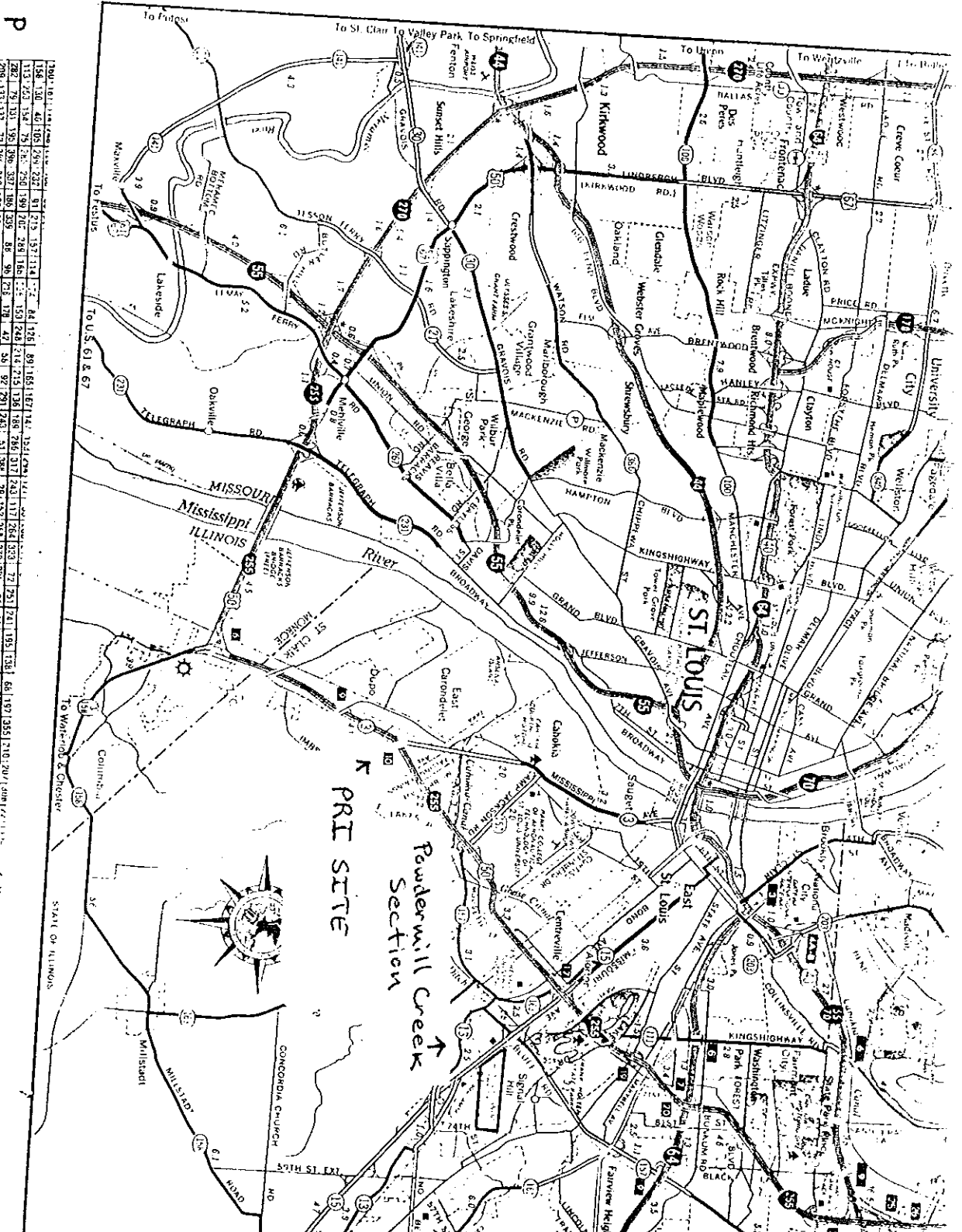
JULY 13, 1991

Field Trip for 1991 ISCA Meeting

Distance	Miles	
0.0	0.0	Start. Turn left out of shrine. Travel down bluff into American Bottoms.
2.0	2.0	Get on I-255 south. Travel south to Dupon exit.
7.6	9.6	Get off at Dupon exit.
0.3	9.9	Turn left at stop sign. Go over overpass
0.3	10.2	Get in left turn lane. Turn left onto frontage road.
1.3	11.5	PRI Development Site. Wetlands discussion.
1.6	13.1	Take frontage road back to Dupon exit. At stop sign travel across frontage road onto the entrance ramp for I-255 north.
4.2	17.3	Exit at 157 north.
0.2	17.5	Turn left at stoplight (Toward Centerville). Travel north on 157.
2.9	20.4	Keep on 163 N thru Centerville.
0.5	20.9	At junction of Rt 163 and Rt 13 turn right.
0.5	21.4	Meet in the parking lot of PT's Night Club. (Note: Ask Leon about a drink he bought here one afternoon.) After everyone catches up, turn right out of parking lot.
0.3	21.7	Travel under train overpass.
0.2	21.9	Turn left onto gravel lane. Follow lane to the right.
0.3	22.2	Note cut in streambank on your right. This is Powdermill Creek Section B
0.1	22.3	Borrow area represents Powdermill Creek Section A.

END.

# Stop Locations.



P

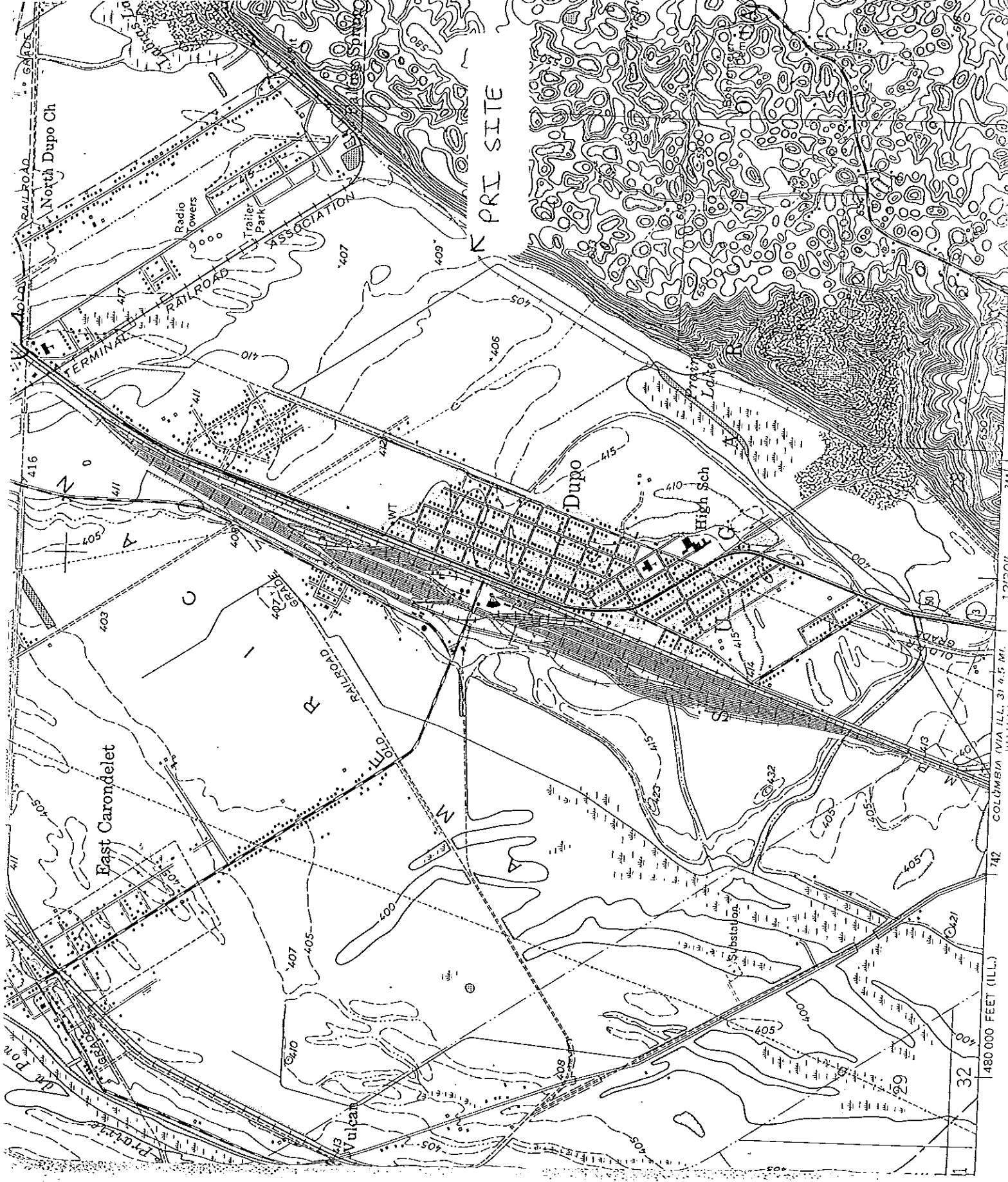
1	2	3	4
158	100	46	105
113	263	134	76
282	29	134	189
209	133	137	77
20	275	42	70
87	117	64	144
246	81	723	130
156	106	106	277
112	252	302	288
135	329	216	225
21	227	116	106
210	54	148	168
270	71	120	154

1  
2  
3  
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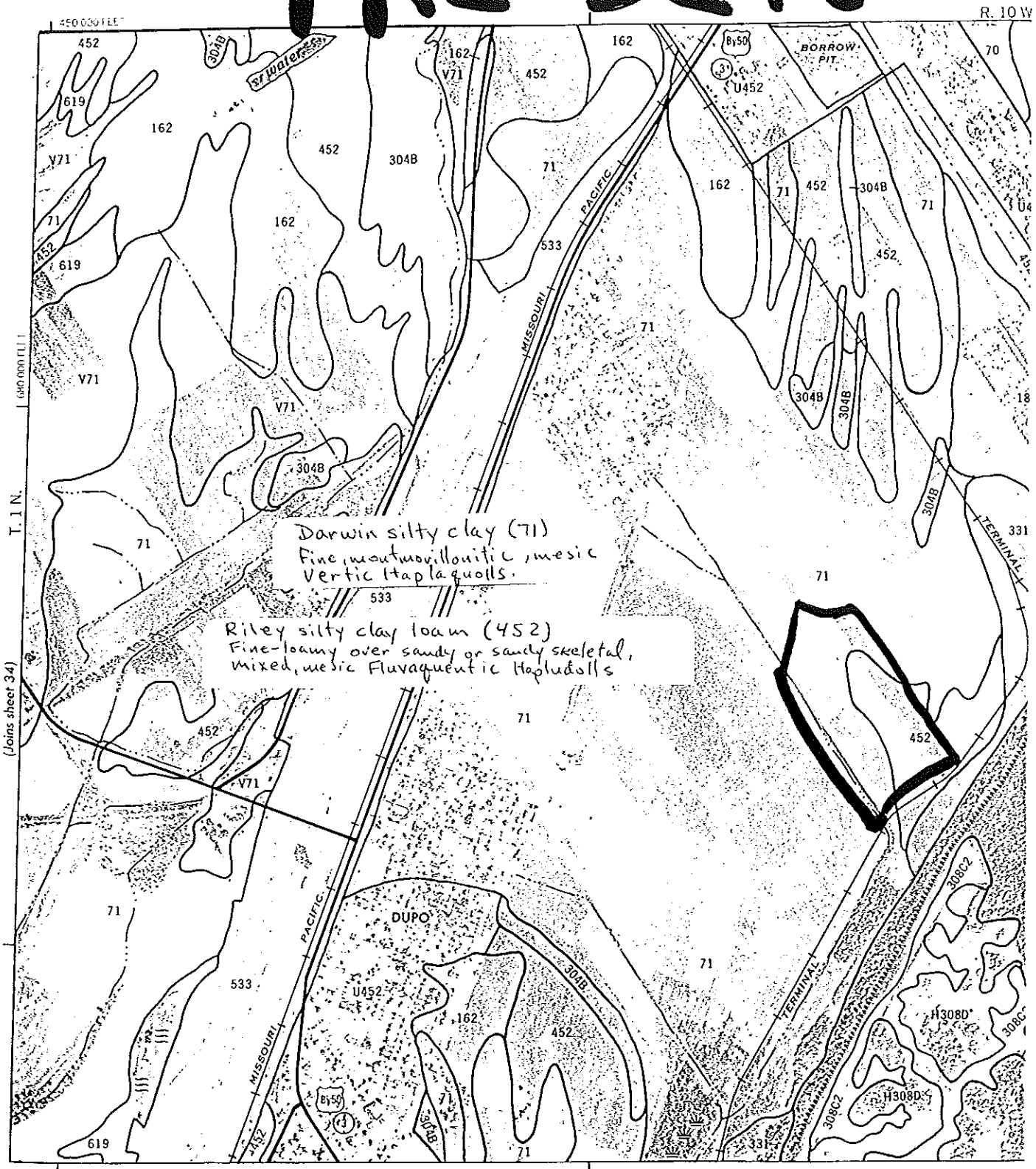
# STOP 1

## PRI DEVELOPMENT SITE

- A) Topographic map of site.
- B) Soil map of site.
- C) Copy of on-site investigation.



# PRI SITE



SOIL INVESTIGATION - ST. CLAIR, CO.

PRI SITE

July 3, 1990

Log of soil borings made on July 2, 1990 in American Bottoms approximately one half (1/2) mile north east of Dupo. Participants in soil investigation were John Harryman, DC, Belleville; Andy Schlichting, SC, Belleville; and Dana Grantham, Area Resource Soil Scientist, Carbondale. The purpose of the investigation was to establish the presence or absence of hydric soils at the site. For approximate locations of each boring, refer to accompanying aerial photograph.

Boring #1: Boring taken from an area of approximately 2 acres in size that had recently had about 40 inches of silty (with some fine sand) fill material added. It appeared that site was being prepared for use as a building site for a commercial/industrial operation. Evidence also indicated that some 2 to 3 feet of the original soil material had been removed prior to placement of the silty fill material. Silty fill material was (7.5YR hue) in color, and resembles Roxana silts taken from the Bluff area. The underlying soil material (estimated to be at the original 2 to 3 foot depth) was dark gray and grayish brown heavy silty clay loam or silty clay. Removal of the original surface and subsoil, and subsequent filling prevented accurate determination of soil properties of the original soil at this boring site.

Boring#2: Somewhat poorly drained (Vertic Hapludolls)  
0-15 inches: Black (10YR 2/1) and very dark gray (10YR 3/1) silty clay.  
15-30 inches: brown (10YR 4/3) silty clay with common very dark grayish brown (10YR 3/2) organic films and dark grayish brown (10YR 4/2) clay films, and common yellowish brown (10YR 5/4, 5/6) mottles.  
30-50 inches: dark gray (10YR 4/1) and grayish brown (10YR 5/2) heavy silty clay loam, silty clay, or clay.

Boring #3: This boring was essentially the same as boring #2. Somewhat poorly drained (Vertic Hapludolls)

Boring #4: Boring #4 was taken in the cornfield on a slightly higher (rise) on the landscape. Somewhat poorly drained. (Fluvaquentic Hapludolls)  
0-12 inches: very dark grayish brown (10YR 3/2) silty clay loam to clay loam.  
12-24 inches: dark grayish brown (10YR 4/2), grayish brown (10YR 5/2), and brown (10YR 4/3) clay loam or loam.  
24-40 inches: brown (10YR 4/3, 5/3) sandy loam, loamy sand, and sand.

Boring #5: Boring #5 is very similar to Borings #2 and #3. Borings #2, #3, and #5 all had cracks on the surface ranging from about 5 to 30 mm in diameter.

The original soil map indicated that Darwin silty clay was the dominant soil on the site. Darwin is classified as a Vertic Haplaquoll and is hydric.

Based upon evidence gathered from the 5 soil borings, it is the consensus of the participants involved in the investigation that the soils on the site in question are not hydric.

Dana R. Grantham  
Area Resource Soil Scientist

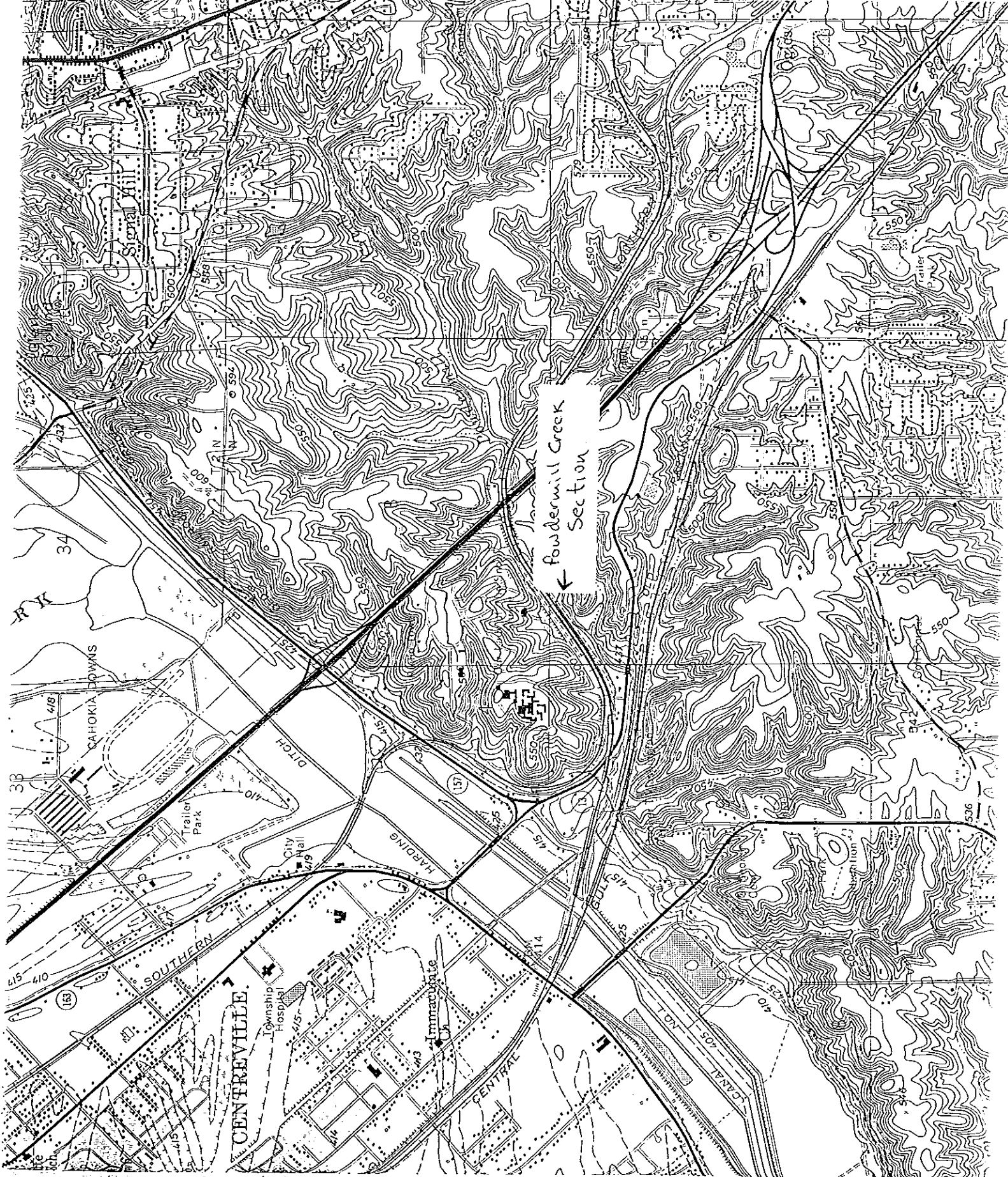




## STOP 2

### POWDERMILL CREEK SECTION

- A) Topographic map of site.
- B) Soil map of site.
- C) Sketch of Powdermill Creek (Section A).
- D) Description of Powdermill Creek (Section A).
- E) Sketch and description of Powdermill Creek (Section B).



FOWDERMILL CREEK  
SECTION

SIGNAL HILL

CAHOKIA DOWNS

CENTREVILLE

Townshio  
Hospital

City  
Hall

Immaculate  
Ch.

SOUTHERN

HARDING

CENTRAL

U.S. 52

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RK

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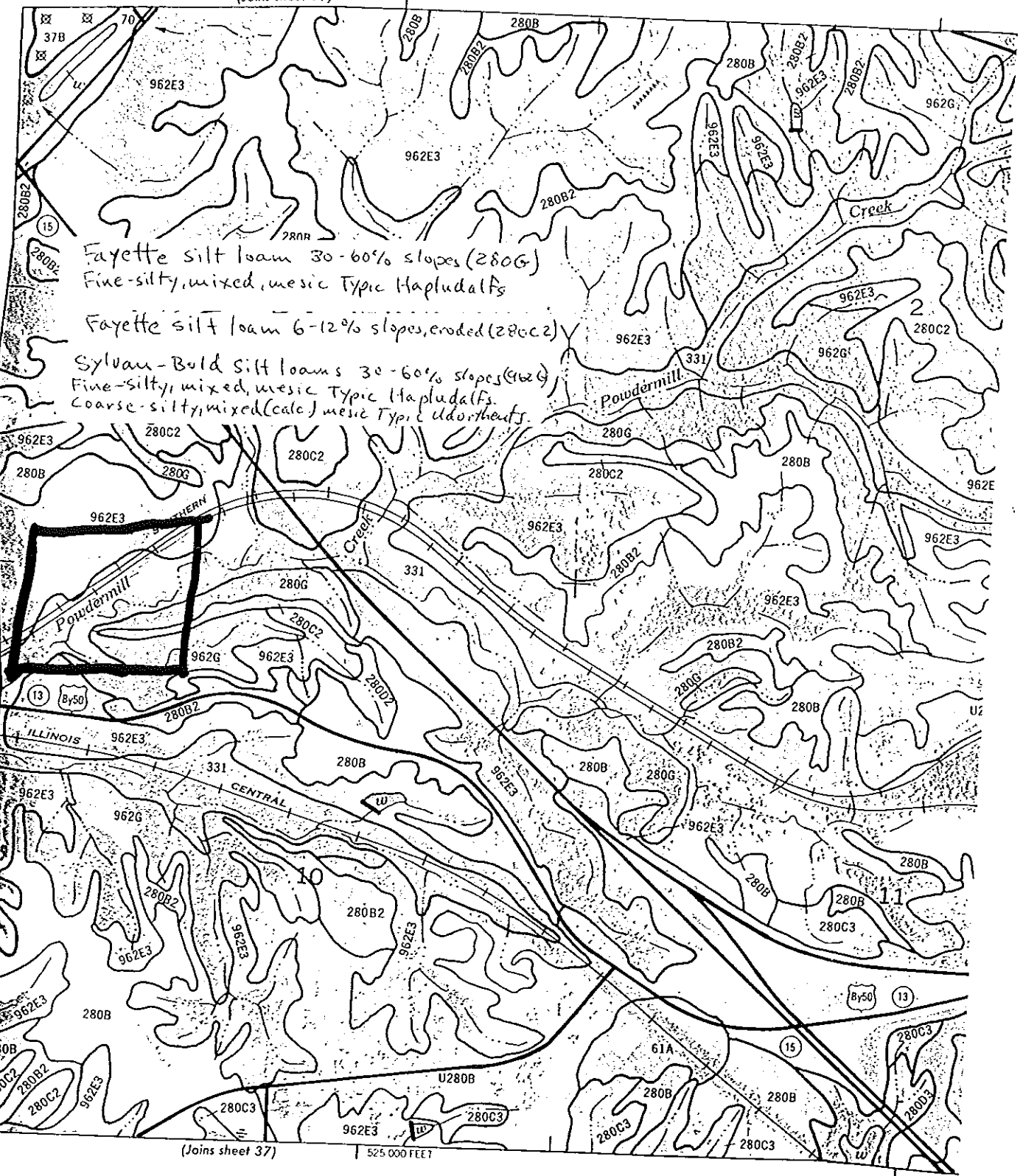
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# Powdermill Creek Sec.

(Joins sheet 19)

1 Mile  
5 000 Feet



(Joins sheet 27)

Scale 1:15 840

1 000  
2 000  
3 000  
4 000

685 000 FEET

(Joins sheet 37)

525 000 FEET

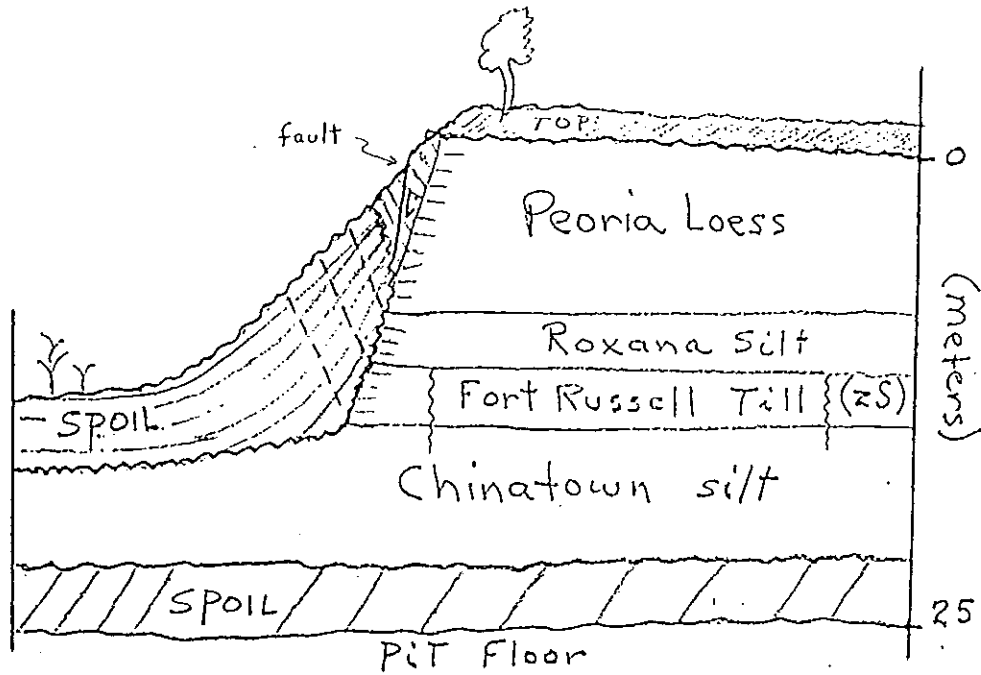


Figure 1. Powdermill Creek sketch, not to scale

Table 1. Powdermill Creek Data (Section A)

Sample	Depth (m)	Unit **	Gravel %	Sand %	Silt %	Clay %	Calcite %*	Dolomite %*
P01	5.0	FRT	6.0	20	56	24	1.7	4.6
P02	5.7	CS	0.3	4	83	13	1.8	11.9
P03	7.2	CS	0	4	86	10	1.4	13.8
P04	8.9	CS	0	tr	92	8	3.8	15.6
P05	9.2	CS	0	1	87	12	0.6	8.7
P06	14.2	CS	0	2	84	14	1.0	5.7

\*\* FRT-Fort Russell Till; CS-Chinatown Silt

\* Percent calcite and dolomite in <74  $\mu\text{m}$  fraction

## POWDERMILL CREEK EAST SECTION (Section A)

Measured in borrow pit in NW NE NW Sec. 10, T. 1 N., R. 9 W., St. Clair County, Illinois, 1984. French Village 7.5 Minute Quadrangle.

Thickness in Meters.

## Peoria Loess

Loess, light yellowish-brown, massive, silt loam, calcareous, Modern Soil developed in upper part: thickness measured in borehole G21 located in NW SW NE Sec. 10, T. 1 N., R. 9 W., St. Clair County, Illinois (McKay, 1977). TL sample number IC5 0.40 to 0.55 m above base.----- 8.07

## Roxana Silt

## Zone r-4

Loess, brown to reddish brown, weakly granular to blocky, Farmdale Soil developed throughout, noncalcareous, A/C1.----- 1.10

## Zone r-3

Loess, light brown, massive, silt loam weakly calcareous, C2. TL sample number IC4 across contact with r-2.----- 2.50

## Zone r-2

Loess, reddish brown, massive, silt loam, weakly calcareous, lower 0.50 m noncalcareous, C2-C1. TL sample number IC3 includes lower 0.10 m of r-2 and upper 0.20 m of r-1.----- 1.50

## Zone r-1

Loess, yellowish-brown, weakly granular to fine subangular blocky in lower 0.20 m, silt in upper part to heavy silt loam in lower 0.20 m, noncalcareous, A/E.----- 1.25

## Glasford Formation

## Fort Russell Till Member

Till, reddish-brown, blocky, clay loam, noncalcareous, Bt.----- 1.25

Till, yellowish-brown, coarse blocky, loam, calcareous, C2.----- 0.25

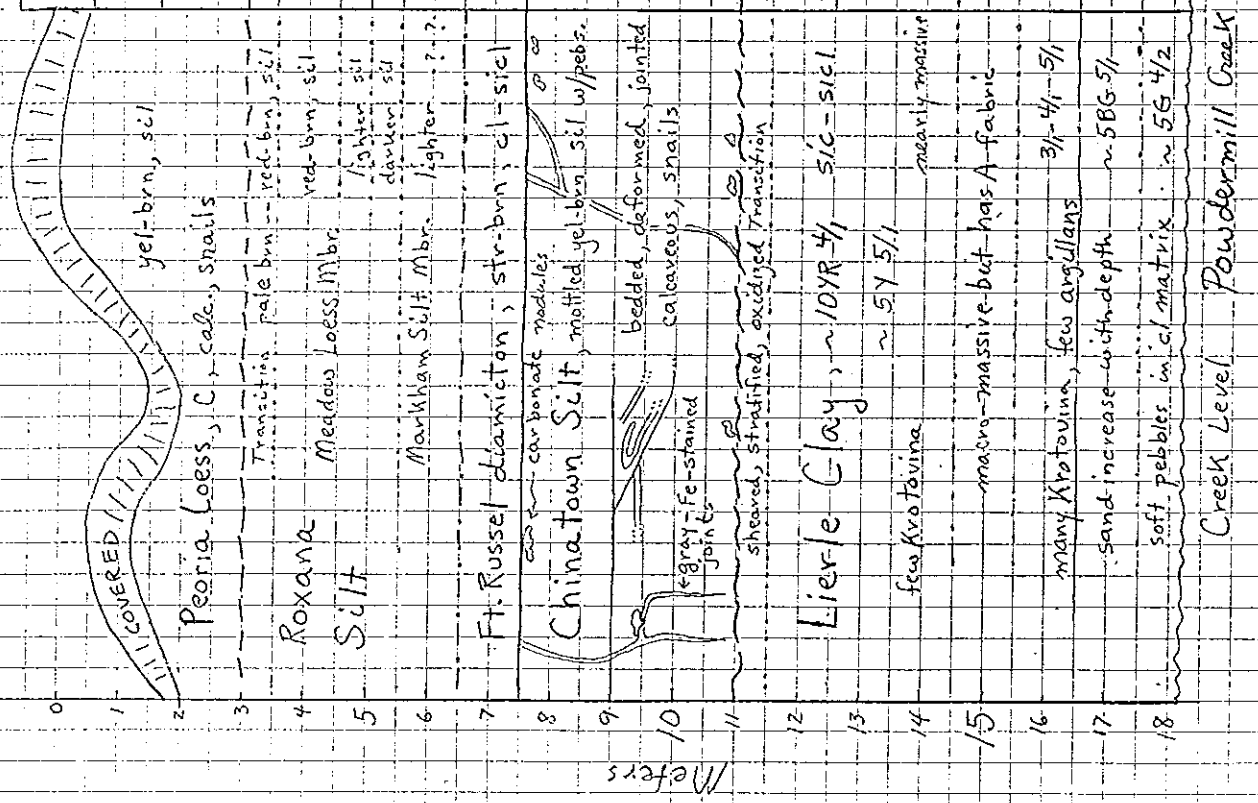
## Chinatown Silt

Loess, light yellowish brown to pale brown, silt loam, calcareous, massive, common iron bands, gastropods, deformed, contains a few isolated pebbles and zones of diamicton along shear planes, C2. TL sample IC2 near base.----- 3.50

Loess, as above but light brown, C2. TL sample IC1 near top -----2.50

Loess, gray, massive, silt loam, thin (5 to 10 cm) diamicton layers common, calcareous to base of section, C4.----- 2.50

TOTAL: 24.42



Soil Horizons	Paleosols	Age (1000s)	Comments
Proposed SCS	(pedo-stratigraphic) (units)		
C	roots of Modern Soil	18	Conformable = Gradation boundary Normal for top of Roxana Silt
2CA		25	Soil "welding" - soil grows up and destroys identity of former layers; lower Roxana could be Loveland Loess equivalent
2BA	Farmdale Geosol		
2EB		45	Sangamon Geosol extends into China town Silt - Top of "Soil C" was previously truncated.
2AB		70	Deformed by glacial stress from left to right - westerly. Joints cut deformation structures and terminate at top = evidence for truncation.
2EA			
3EB	Sangamon Geosol	140	
3Bt		200	Good example of what was called "Yarmouth Gumboil". Later interpreted to be Accretion - Gley. Actually it is alluvium with stream soil development but with poor expression.
4C	("Soil C") (geosol)	400	
5A/4C	Yarmouth Geosol ("Soil B")		
5A			
5Bg			
5Cg			
5CBg			
5Cg			
6Cg			

1000 ft down stream from borrow pit (Sec. A)  
Leon R. Folmer, ISGS, 6/7/91