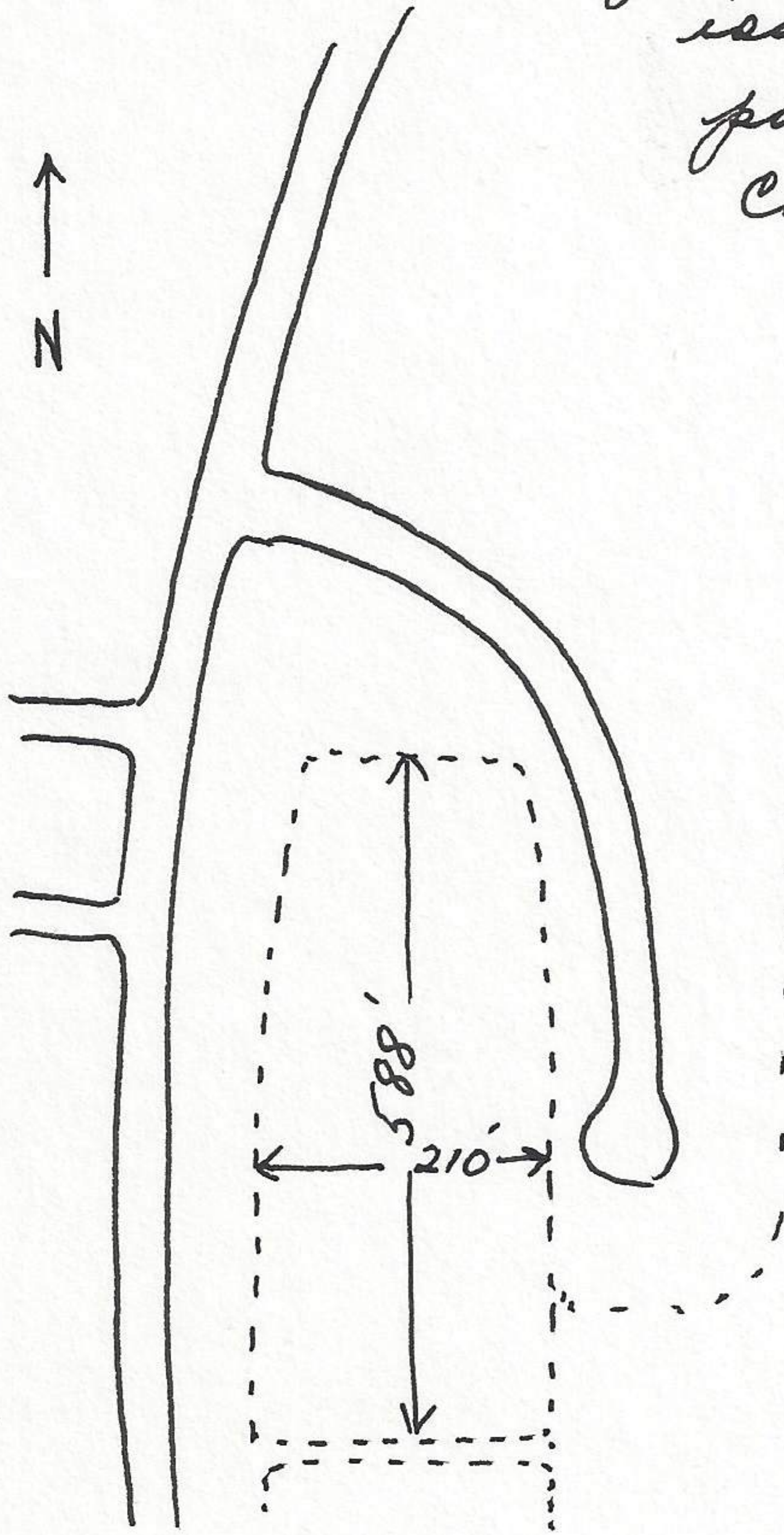


1 8/10 mi. W and 1/2 mi. N Lawrence (P.O.), Douglas Co., Kansas

Oct. 5, 1971

At approx. the center of sec. 26, R19E and T12S, examined a grackle, cowbird, starling roosting site. The isolated grove of trees lies between two paved city roads, the west one having considerable traffic during the day!



The area used is 588' x 210' and is dominated by elm overaging 30' high.

Osage orange trees approx every 50'. Small understory of dogwood.

Ground of dry leaves and no vegetation or brush. The total area of roosting space is 11760 sq. ft.

The number of individual excreta^{on ground} averages 576 per sq. foot or every 1/2 inch. Some areas are whitewashed, some 1 to 1 1/2 inches apart but on the average are 1/2 inch apart.

On the basis of 11760 sq. feet and 576 droppings per sq. feet, the number

$$\begin{array}{r}
 11760 \\
 \times 576 \\
 \hline
 82320 \\
 58800 \\
 \hline
 6,773,760 \text{ individual droppings}
 \end{array}$$

If birds have used this area for two week (or a conservative time of three weeks) the number birds contributing to the total biomass of excreta is →

This on the basis of one evacuation per night.

On the basis of estimate of percentages of the flock of birds from previous estimates the numbers of birds are as follows.

- 80% grackles = 258,009
- 15% starling = 48,376
- 5% cowbirds = 16,125

$$\begin{array}{r}
 322,512 \text{ birds per day} \\
 21 \overline{) 6,773,760} \\
 \underline{63} \\
 47 \\
 \underline{42} \\
 53 \\
 \underline{42} \\
 117 \\
 \underline{105} \\
 26 \\
 \underline{21} \\
 50 \\
 \underline{42} \\
 8
 \end{array}$$

If two evacuation per night the number would be 161256.

Some of the variations of partial flock composition are: 98% grackles, 2 percent starling; 5% grackles, 70% starling, 20 percent cowbirds. Variation of flock composition and arrival time would be a significant observation.