

Griswold, Winters, Swain & Mullin / Landscape Architects

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Pittsburgh, Pennsylvania 15217
Telephone (412) 521 3000

1973

GROUNDS MAINTENANCE GUIDE

Borough of Fox Chapel

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GROUNDS MAINTENANCE GUIDE

Borough of Fox Chapel

INTRODUCTION

The purpose of this Guide is to establish certain principles which, adopted as policy, will assure the continuation of the "character" of the Borough of Fox Chapel.

The Borough, for the most part, provides an excellent example of the ways in which a residential community may be placed on a tract of land characterized by rugged terrain, native and mature woodland, brooks and streams. It is a place where man and nature coexist. Here one finds, to a degree seldom matched, a generally consistent architecture, adapted to the land rather than the other way 'round. Here one finds a respect for living things and a widely held desire to preserve the land. Here one finds private grounds of distinction and great beauty, representing various tastes.

The corridors of the Community form the fundamental framework for its overall excellence. Along its roadways both arterial and near-private, one should find the highest order of preservation. And this is largely the case. In the public lands one should be readily aware of the natural heritage of the community. This high level of stewardship is in evidence, abundantly. What is needed is a firm policy to undergird the general resolve to keep things in this shape for all time.

The basic premise of this Guide has several components. First, the least is more often than not the best. Second, the natural state is to be preferred over an unnatural one. Third, there is frequently a need to take deliberate steps to "encourage" the natural state.

Left alone, natural forces shaped the land and caused the vegetation to develop as it has. There is remarkable variety in this "plan". It is native to this part of the world, a logical, ecological whole. Given enough time, centuries perhaps, natural forces would cause "successions" to occur. Some might be traumatic. Mature growth would subside in due course, gradually giving way to new trees and shrubs and ground plants. Wind, water, and wildlife would carry in other growing things to the enhancement of variety. The delights of color in blossom and foliage would always attend such natural "development". Man, however, can assist this process, operating within constraints imposed by nature.

Man can accelerate the introduction of new materials so long as only those plants found in given natural situations are used. This Guide suggests how such work may be done, on a limited basis.

The key, however, is not in widely exercising even this much control. Rather, this Guide suggests more what not to do than what to do. Throughout, by notation of the Area Maps, it is recommended that mowing along roadsides be minimized. The term "mow sparingly" is used quite often. By that we mean to suggest mowing not closer than 6 inches and then only about twice annually - three times, at most. The objective is simple; to preserve the natural state in as high a degree as possible - for the reasons outlined above - so that the corridors of Fox Chapel are "maintained" in a condition which establishes, clearly, the overall character of the Community.

In a few instances, we suggest removal of certain installations of fencing, posts and plantings which are inconsistent with the natural state.

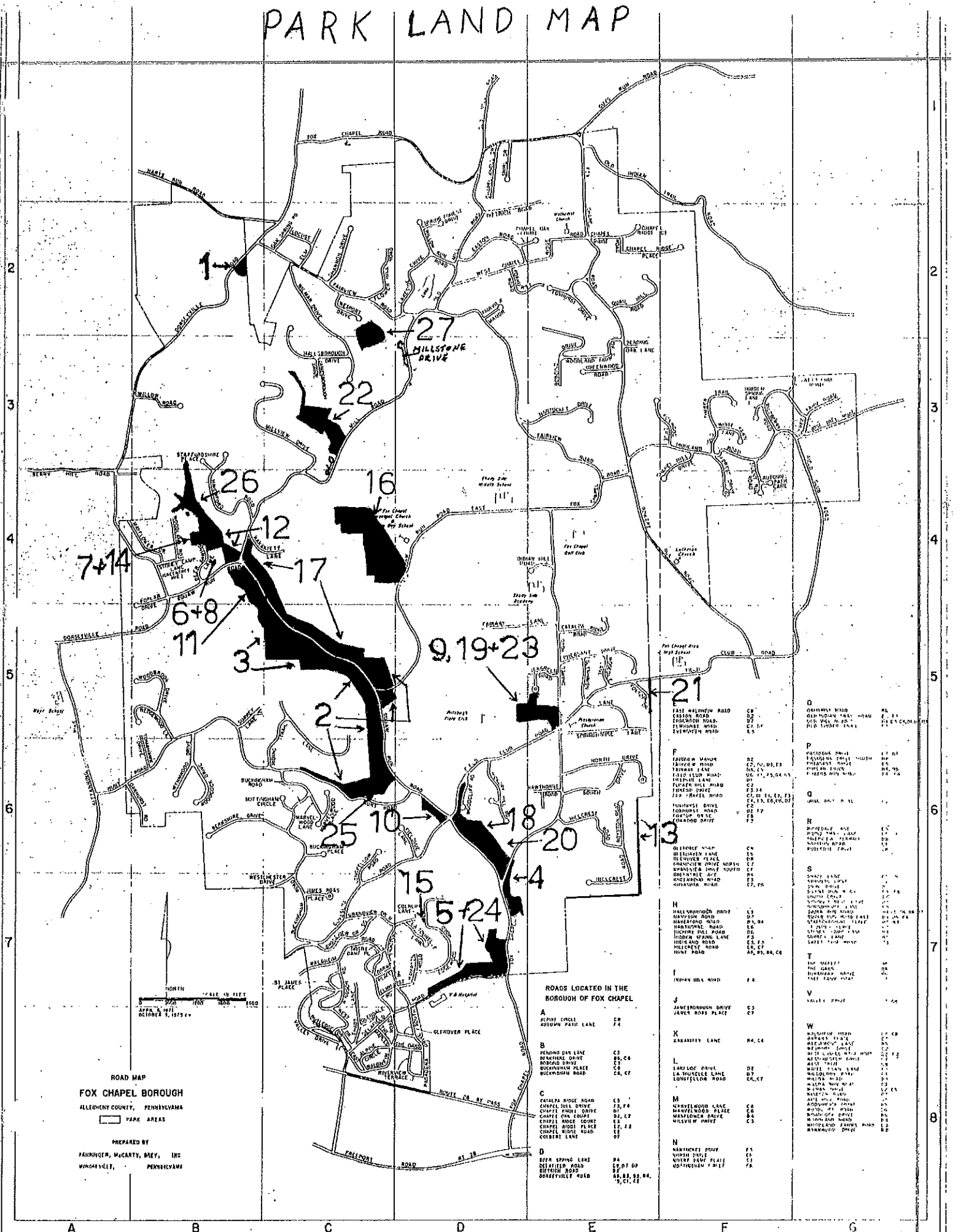
We recommend trimming at intersections, even severely, in the interests of creating clear visibility of the roadways.

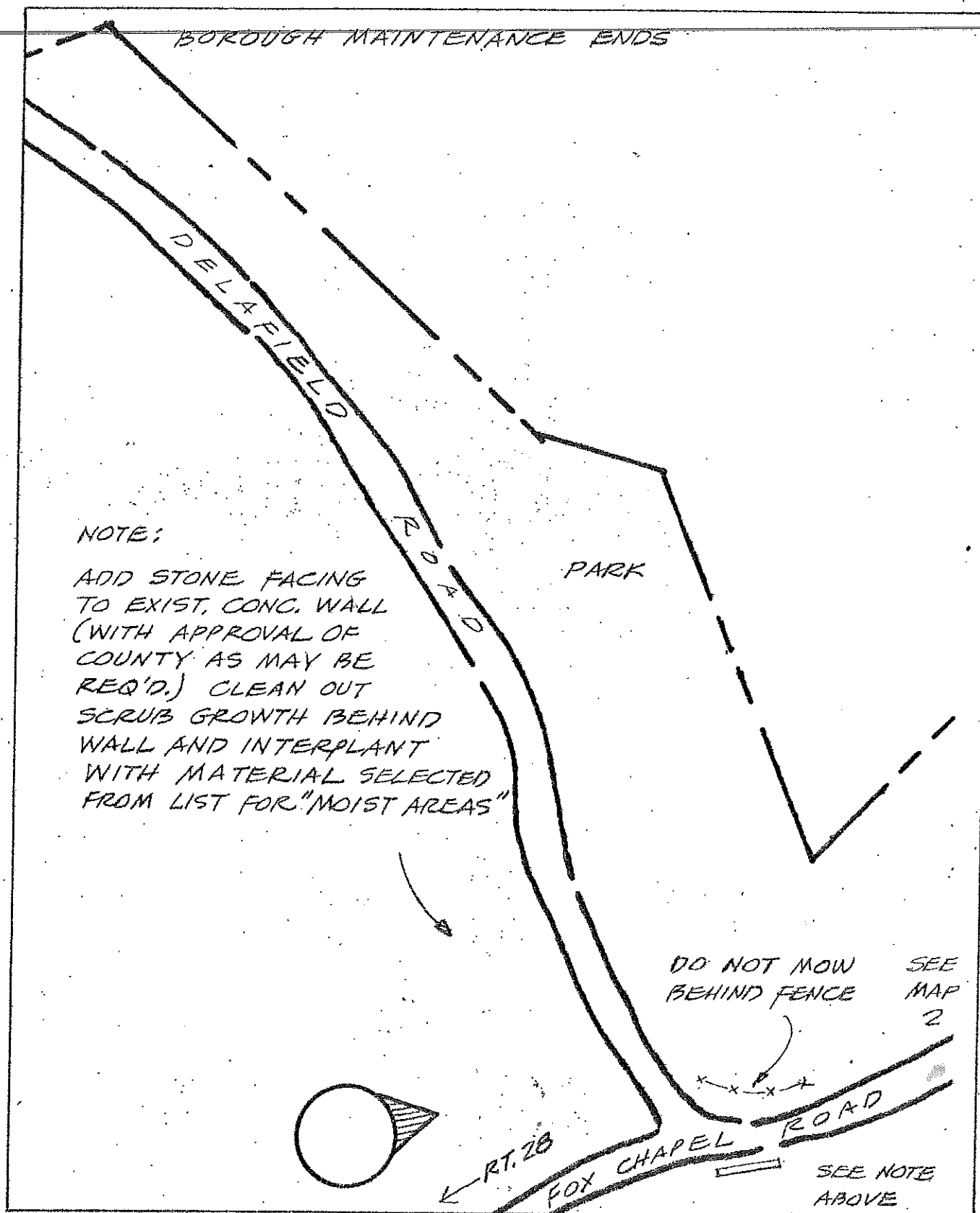
With some reluctance, yet with an understanding of the situation, we urge continuance of mowing along streets yet to be fully developed.

To a great extent, the care with which the public rights-of-way and the public lands are treated is a benchmark for private maintenance. It is hoped that this Guide, and its resultant, will stimulate even deeper regard on the part of the Borough residents for preservation of the superb natural character of the Community. There might be, then, more woodlot, more native plants, less exotic materials and less finely manicured lawn.

August 1973

PARK LAND MAP

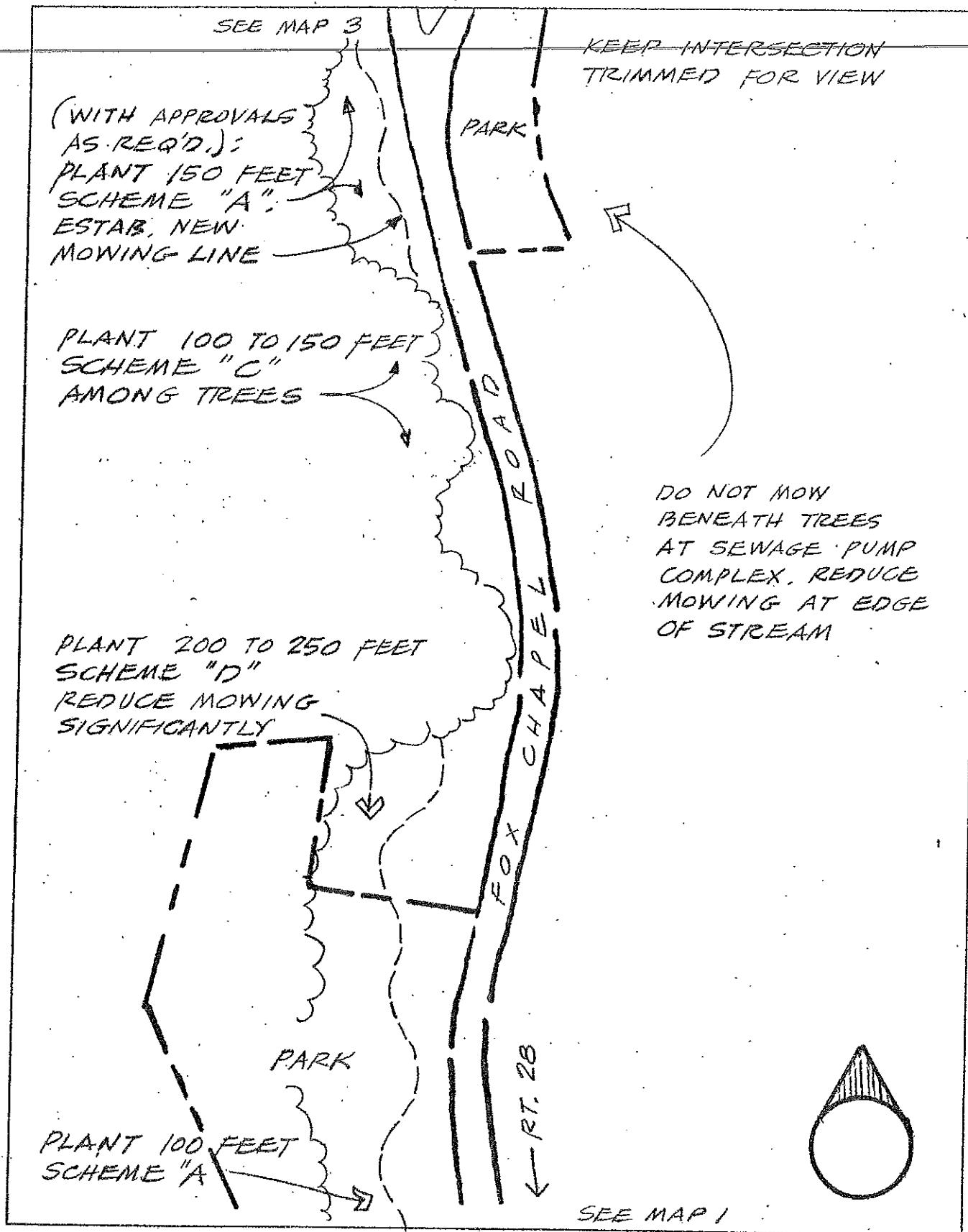




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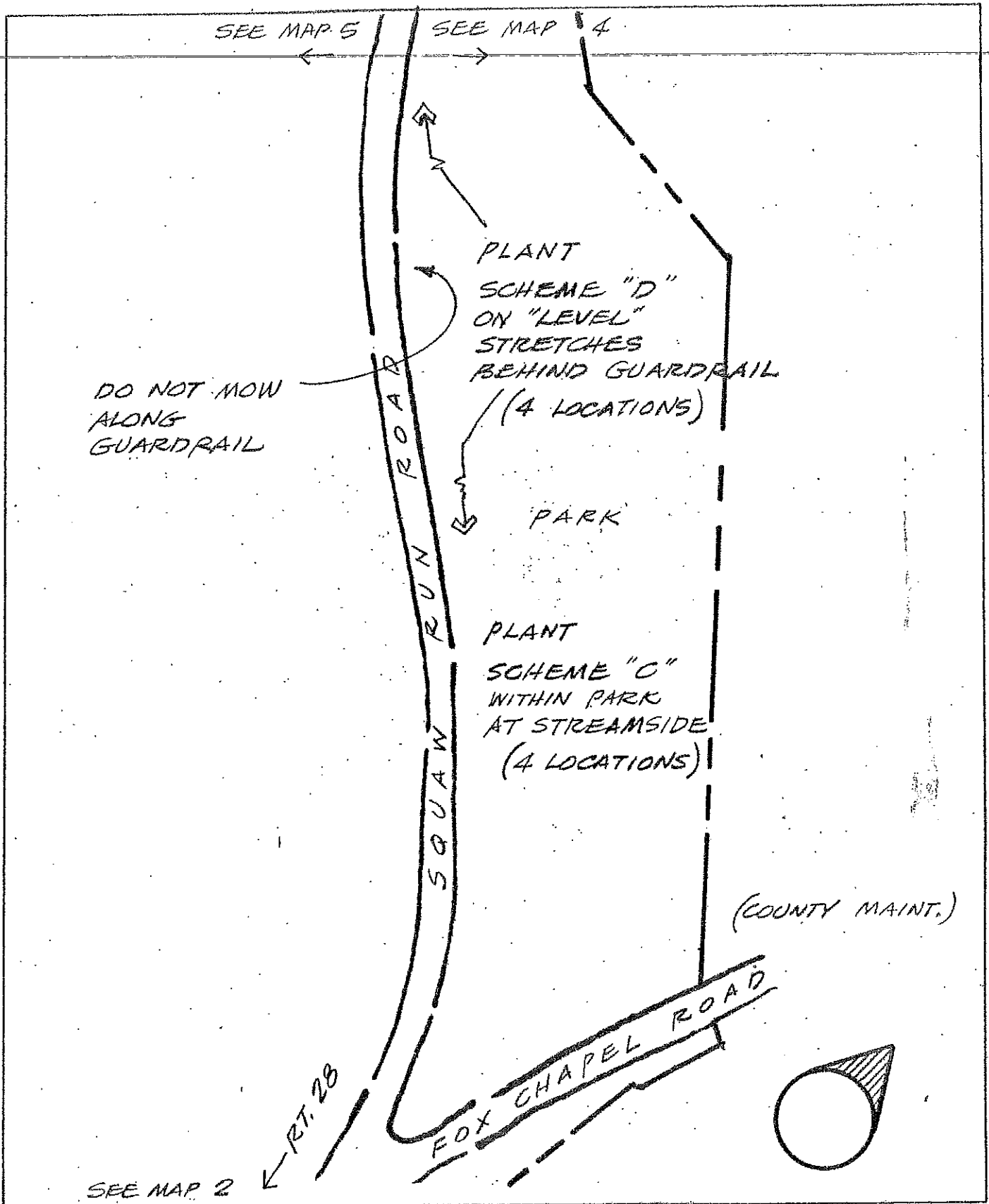
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FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

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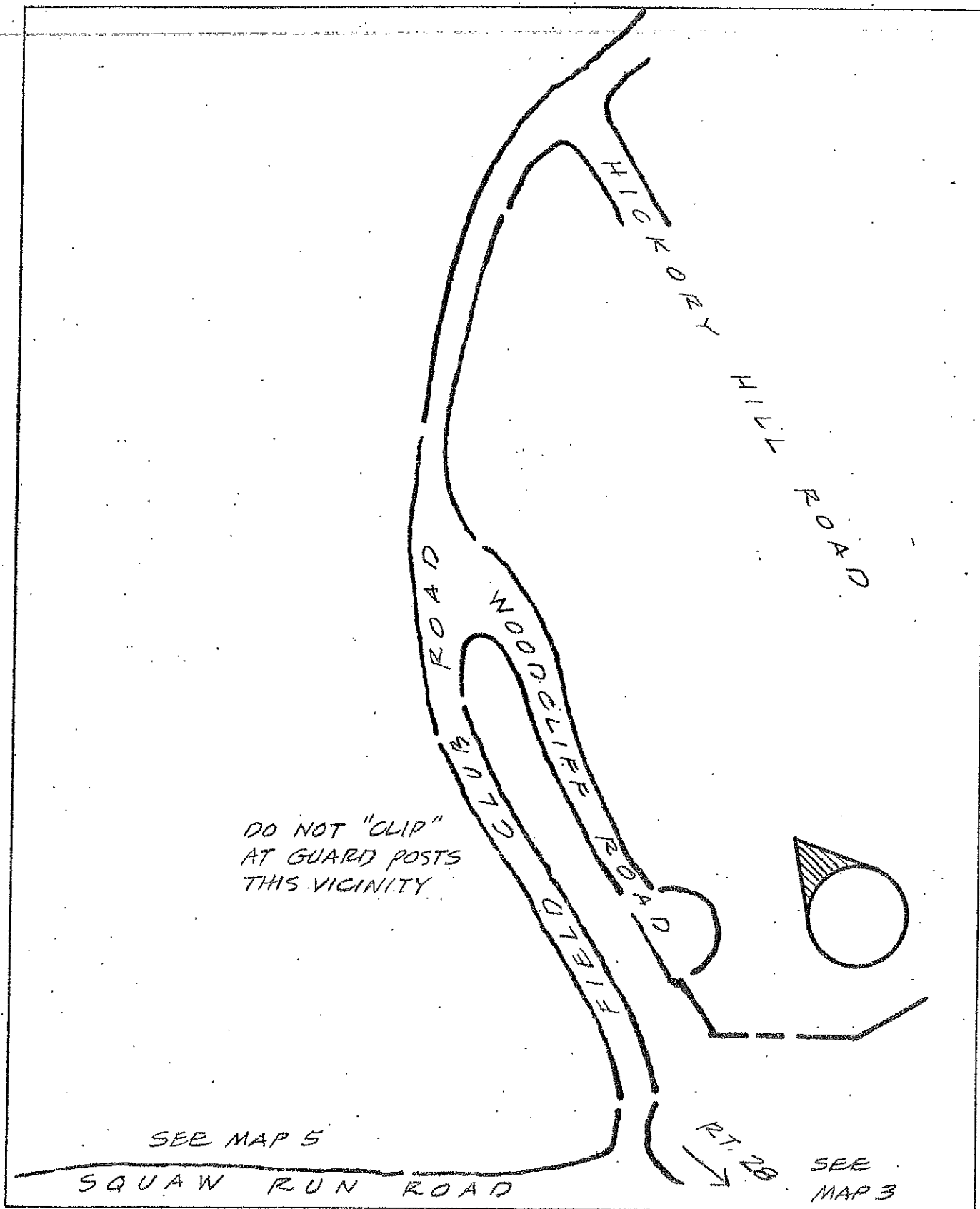
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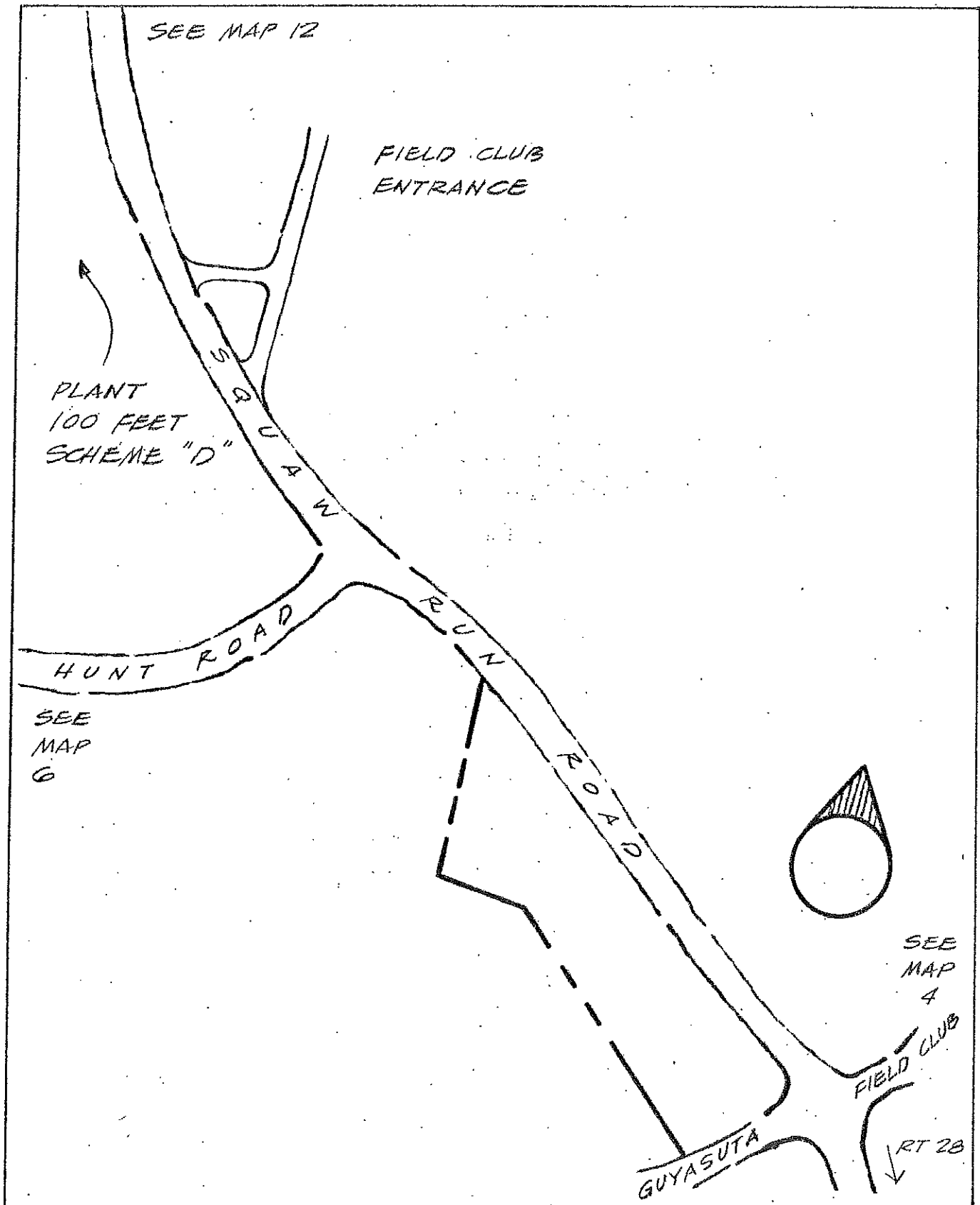
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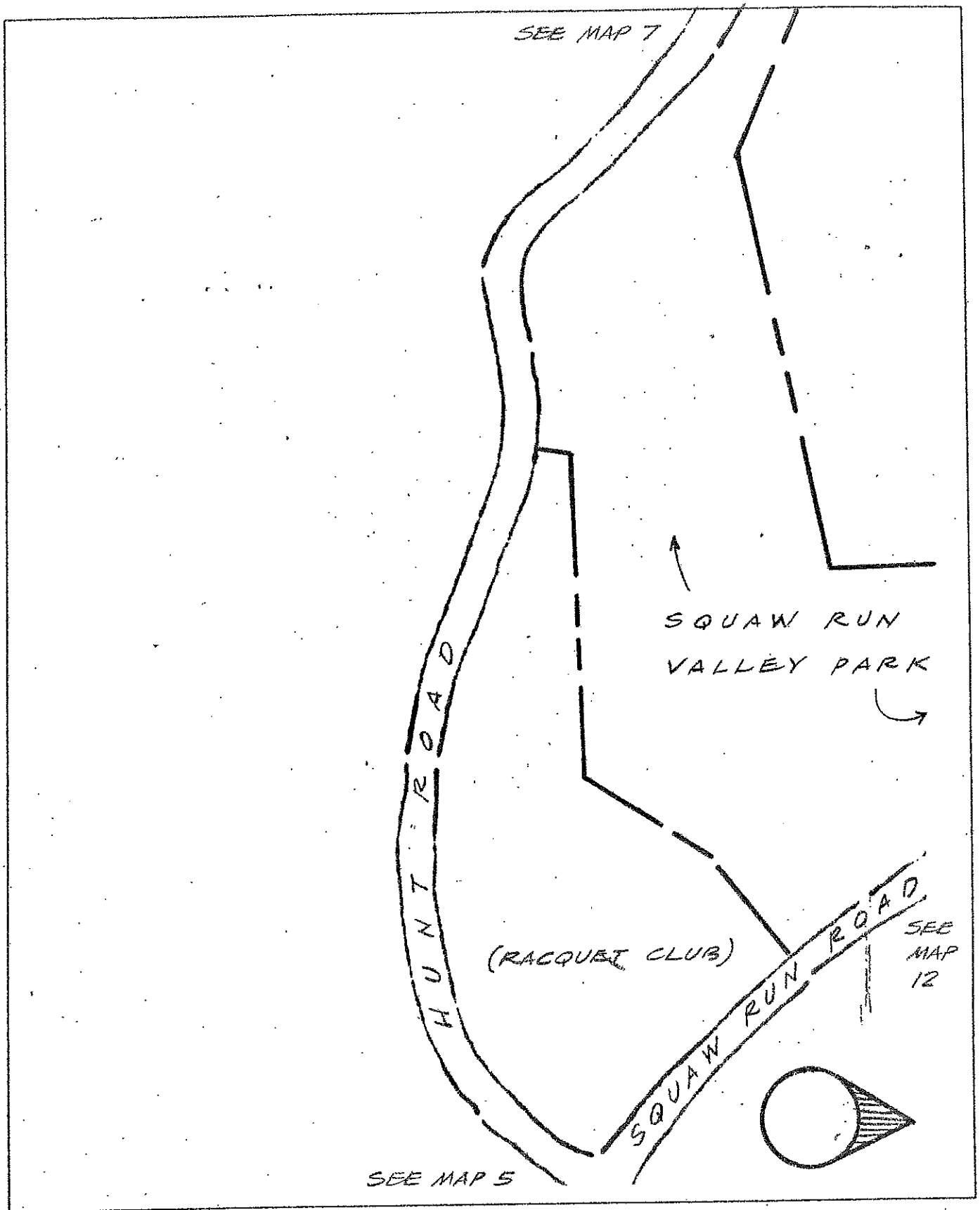
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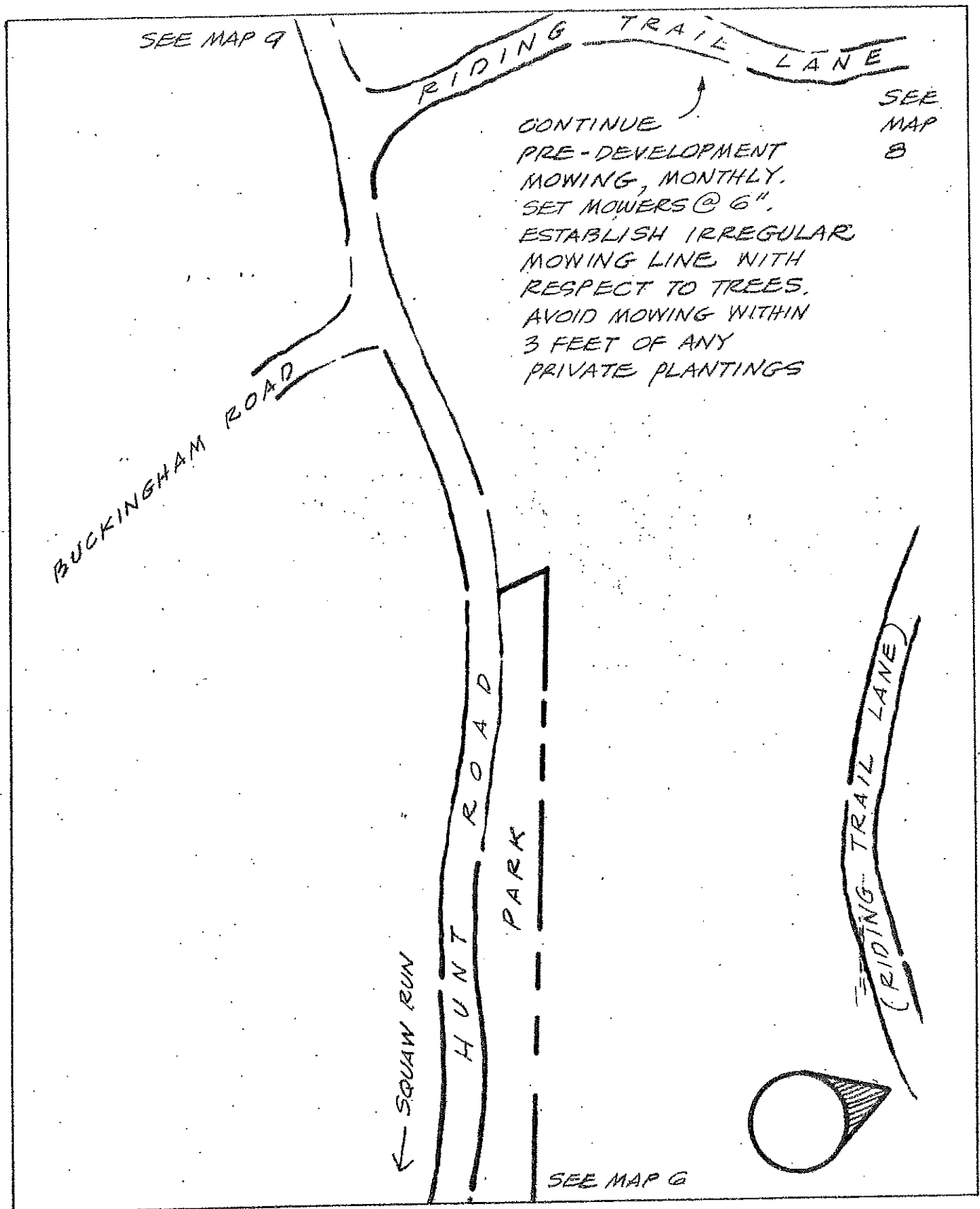
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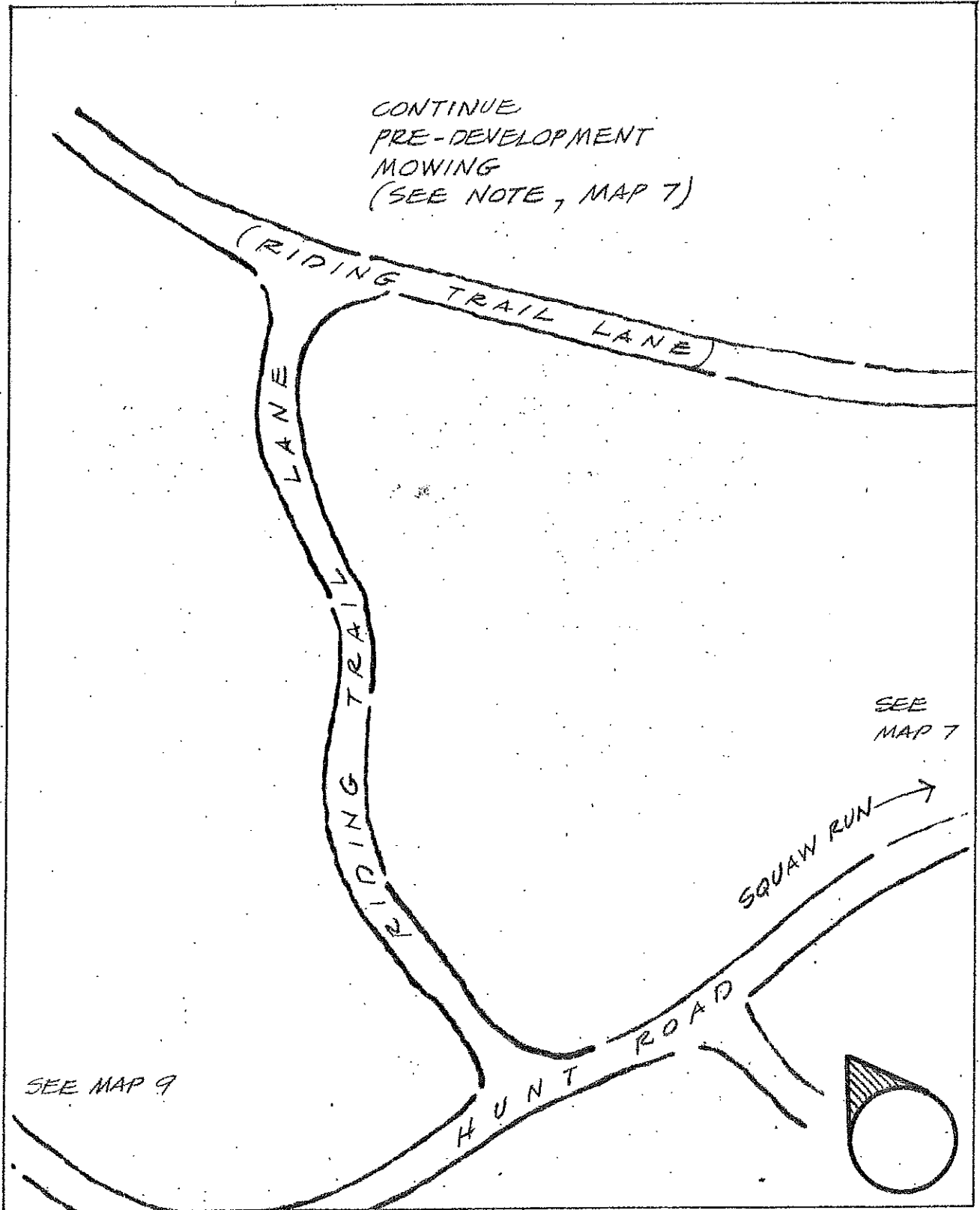
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FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

MAP NO.

7

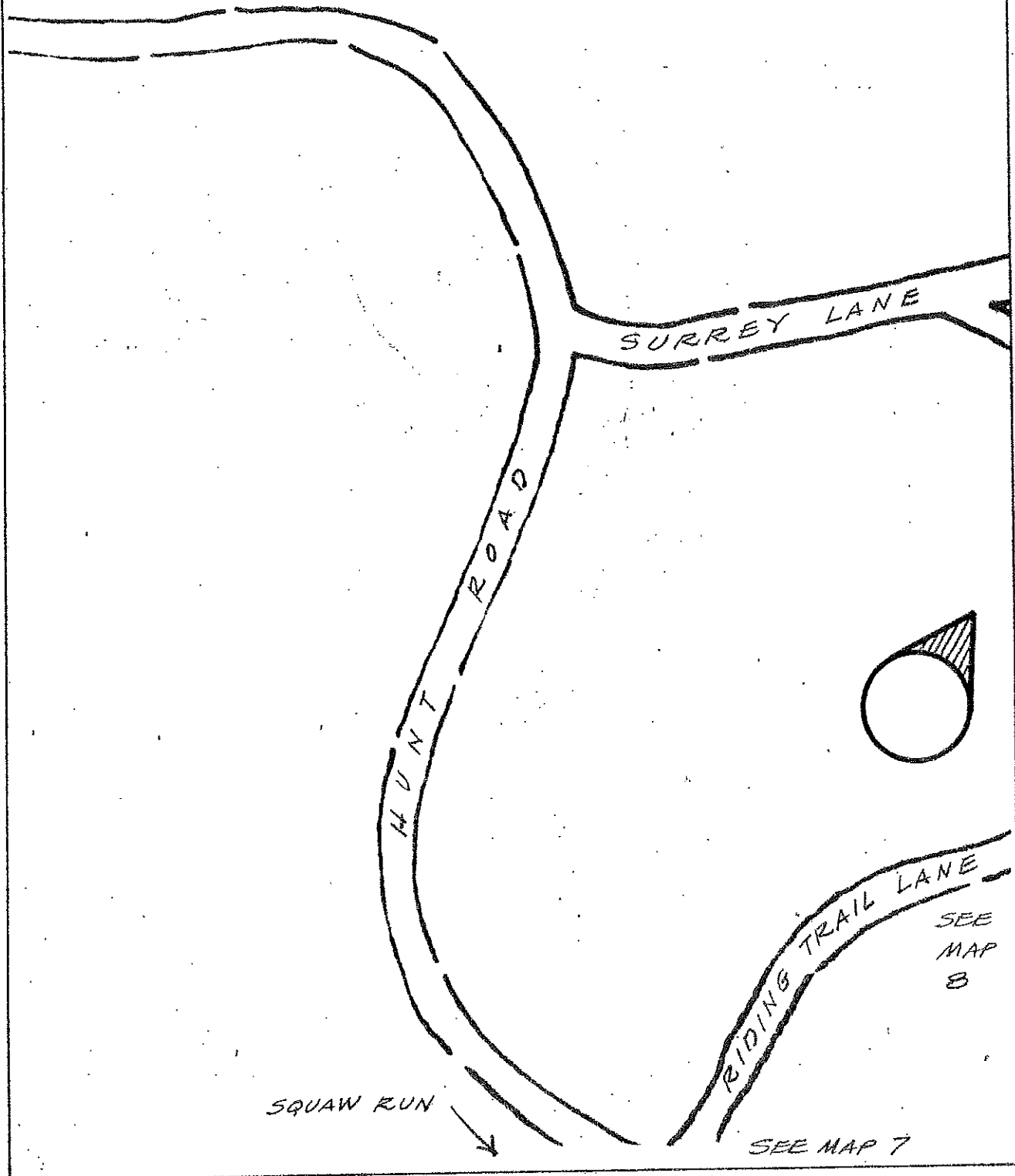


FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

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8

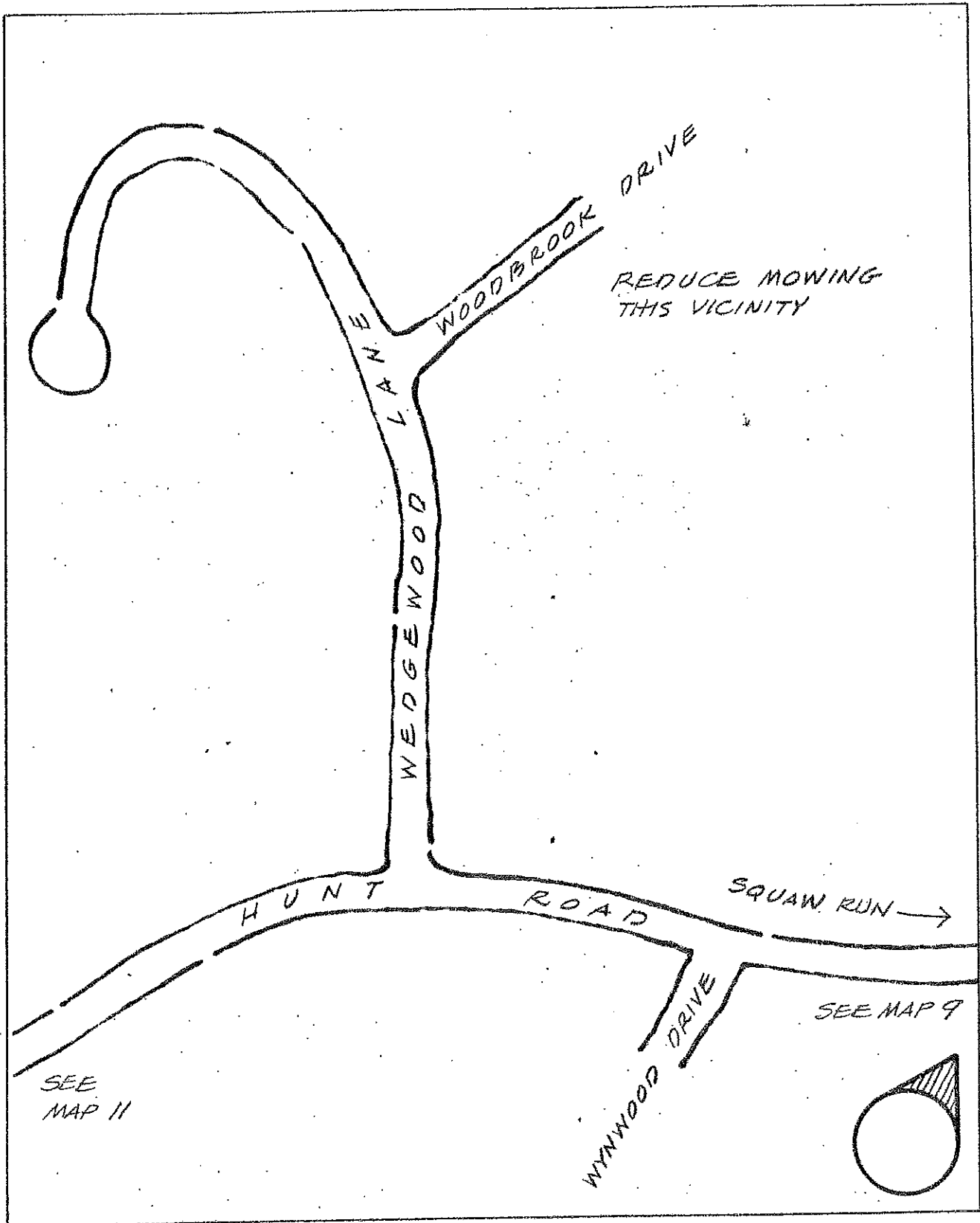
SEE MAP 10



FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

MAP NO.

9



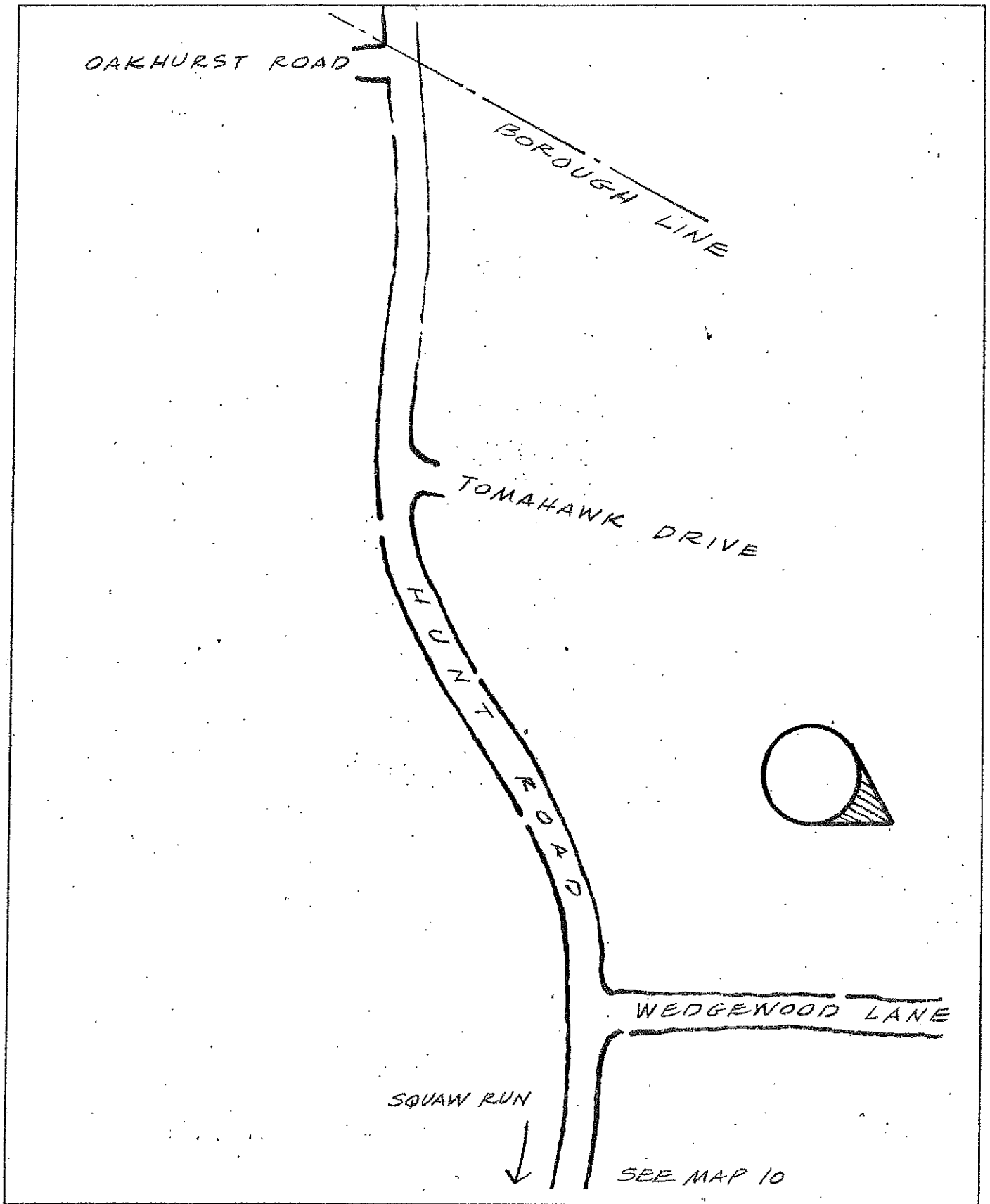
FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

MAP NO.

10

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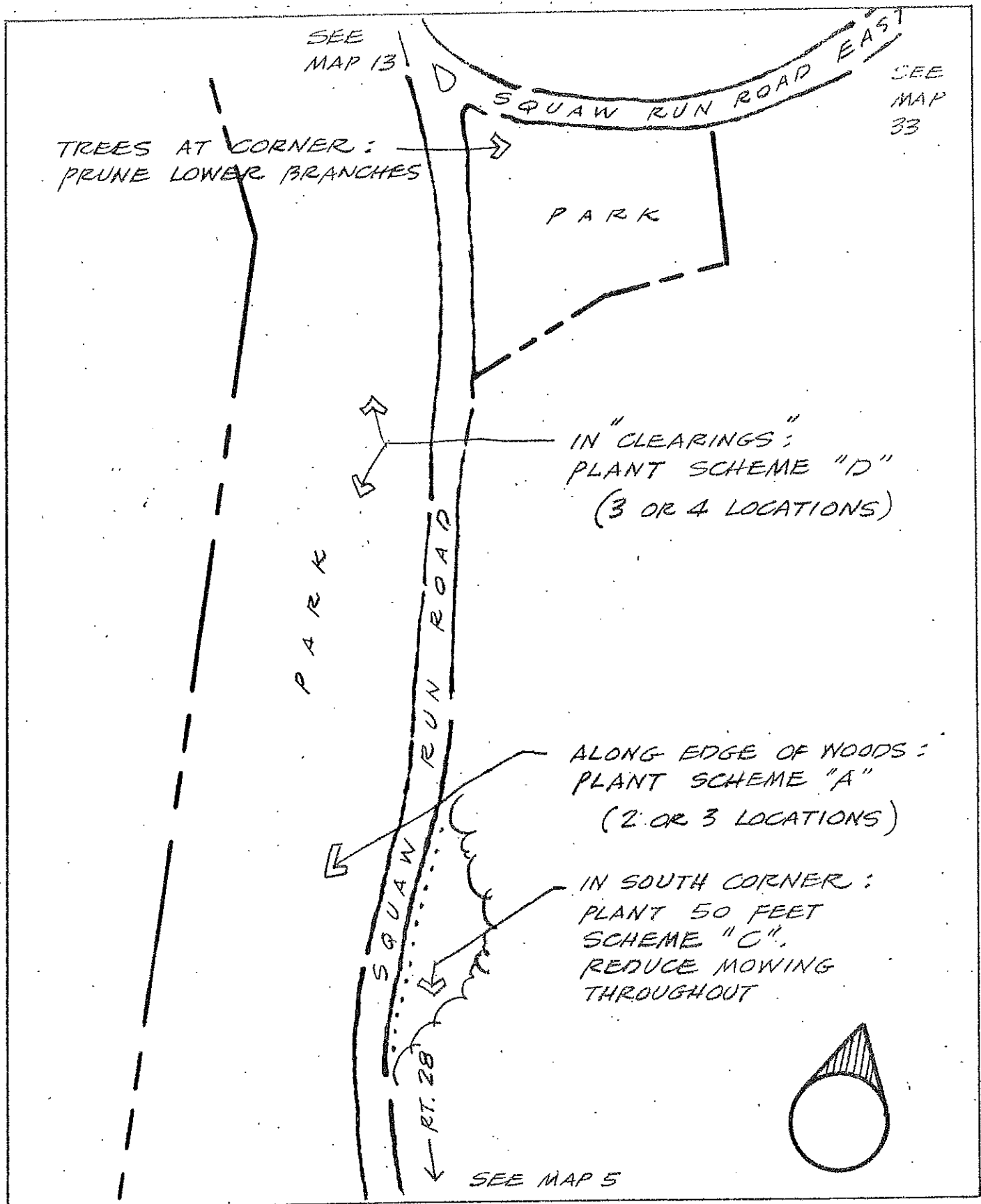
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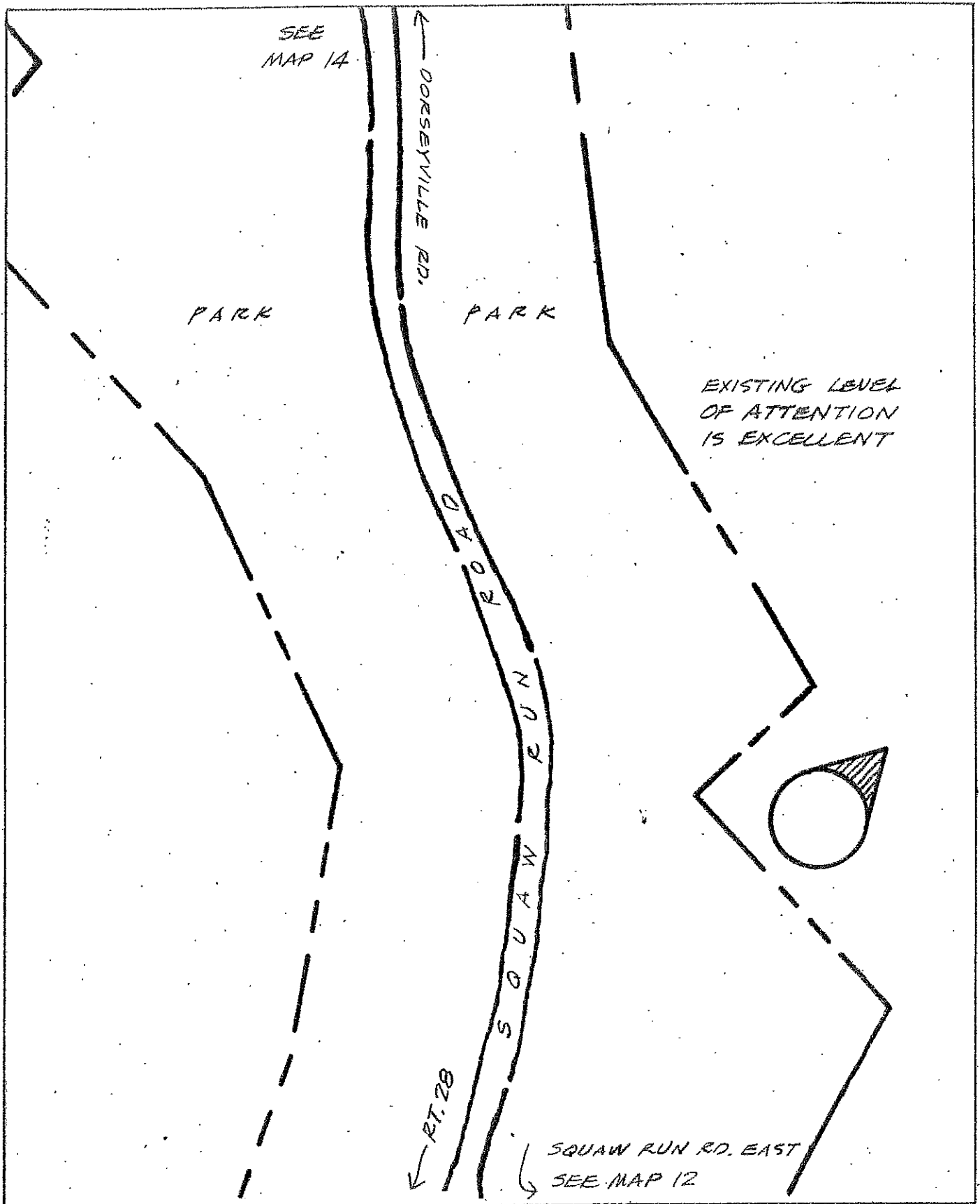
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FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

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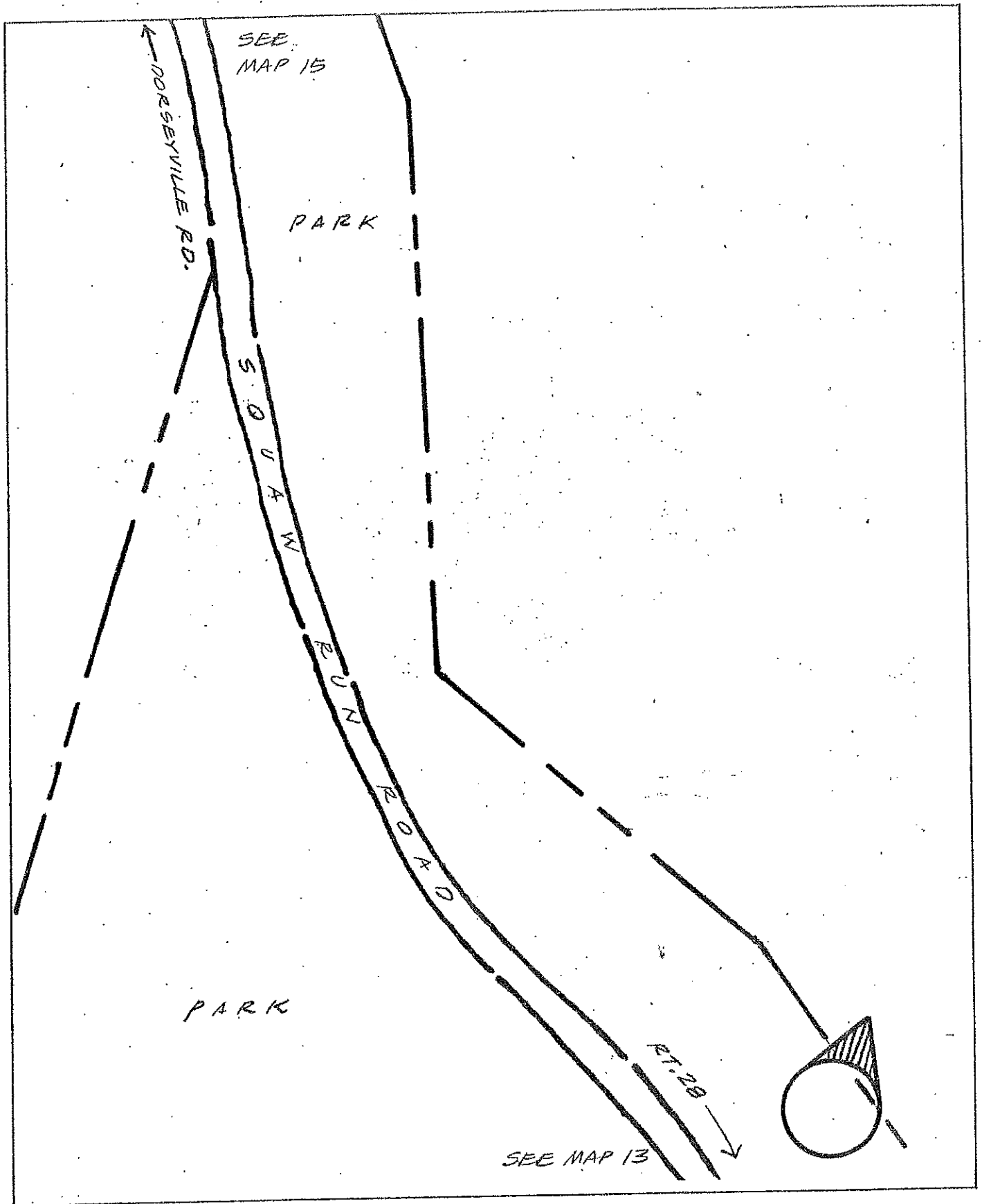
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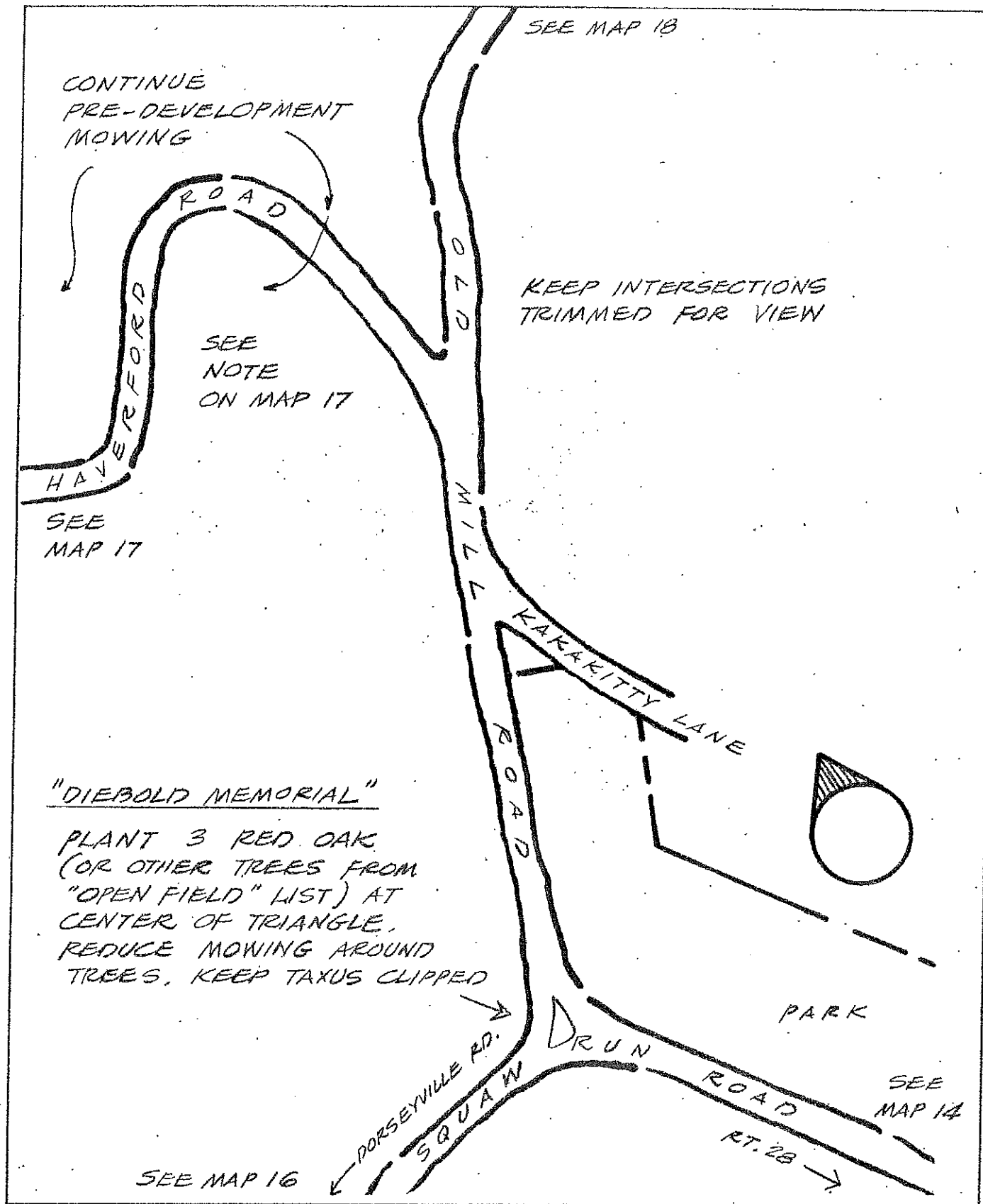
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FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

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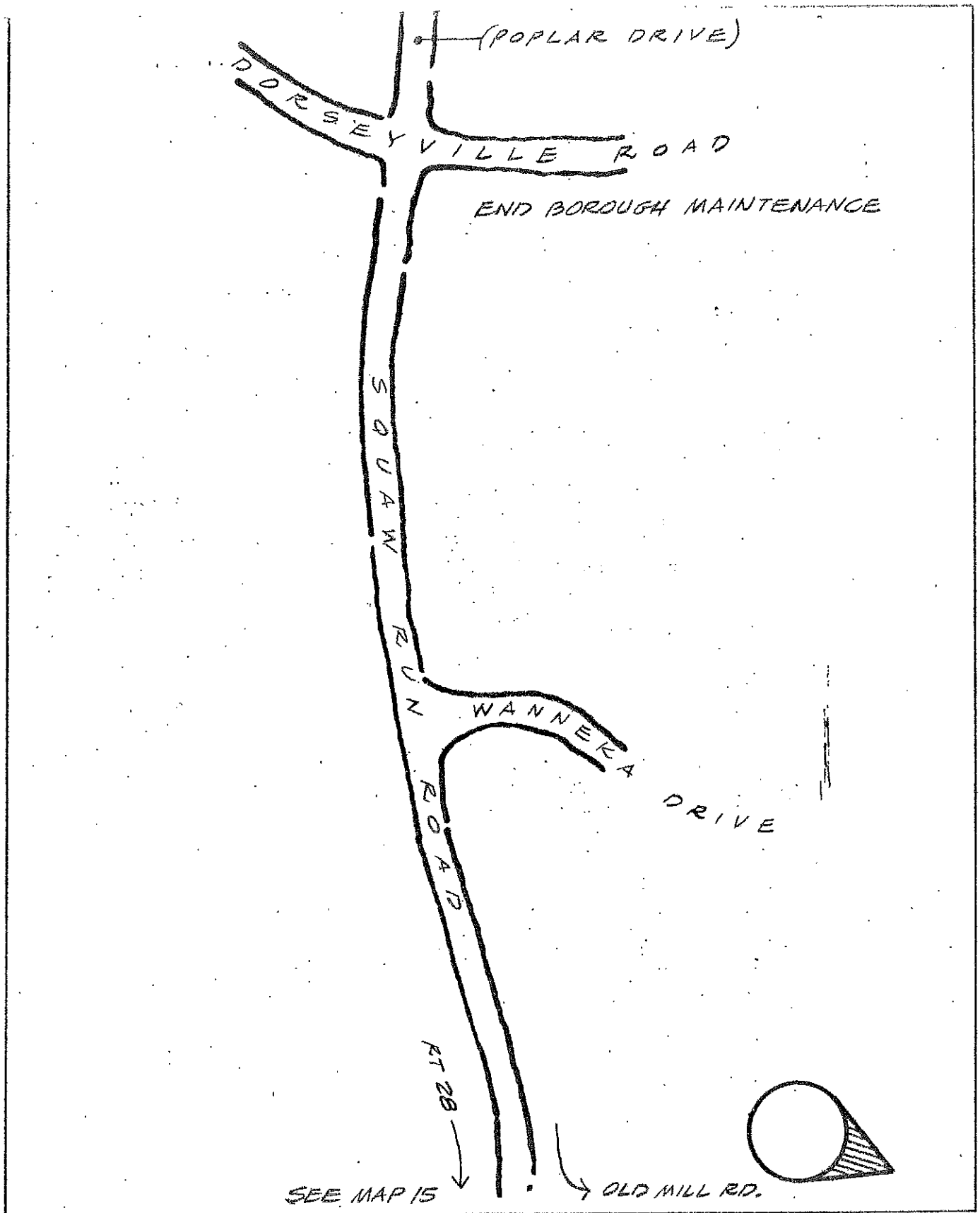
14



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MAP NO.

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MAP NO.

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STAFFORDSHIRE PLACE

MIN. 6'

MAX 20'

HAVERFORD

CONTINUE
PRE-DEVELOPMENT
MOWING, MONTHLY.
SET MOWERS @ 6".
ESTABLISH IRREGULAR
MOWING LINE WITH
RESPECT TO TREES.
AVOID MOWING WITHIN
3 FEET OF ANY
PRIVATE PLANTINGS.

ROAD

SQUAW RUN

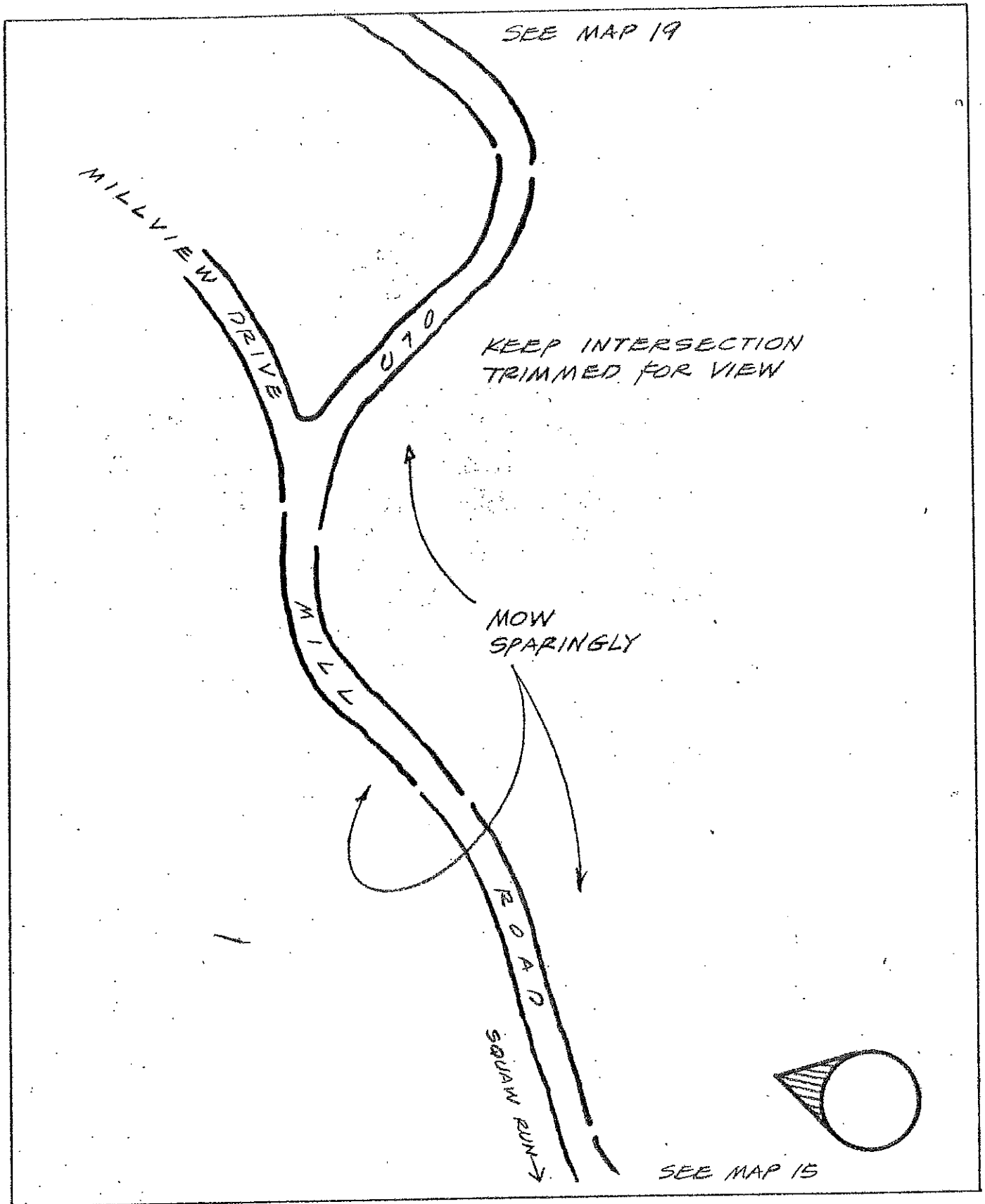
OLD MILL RD.

SEE MAP 15



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MAP NO.



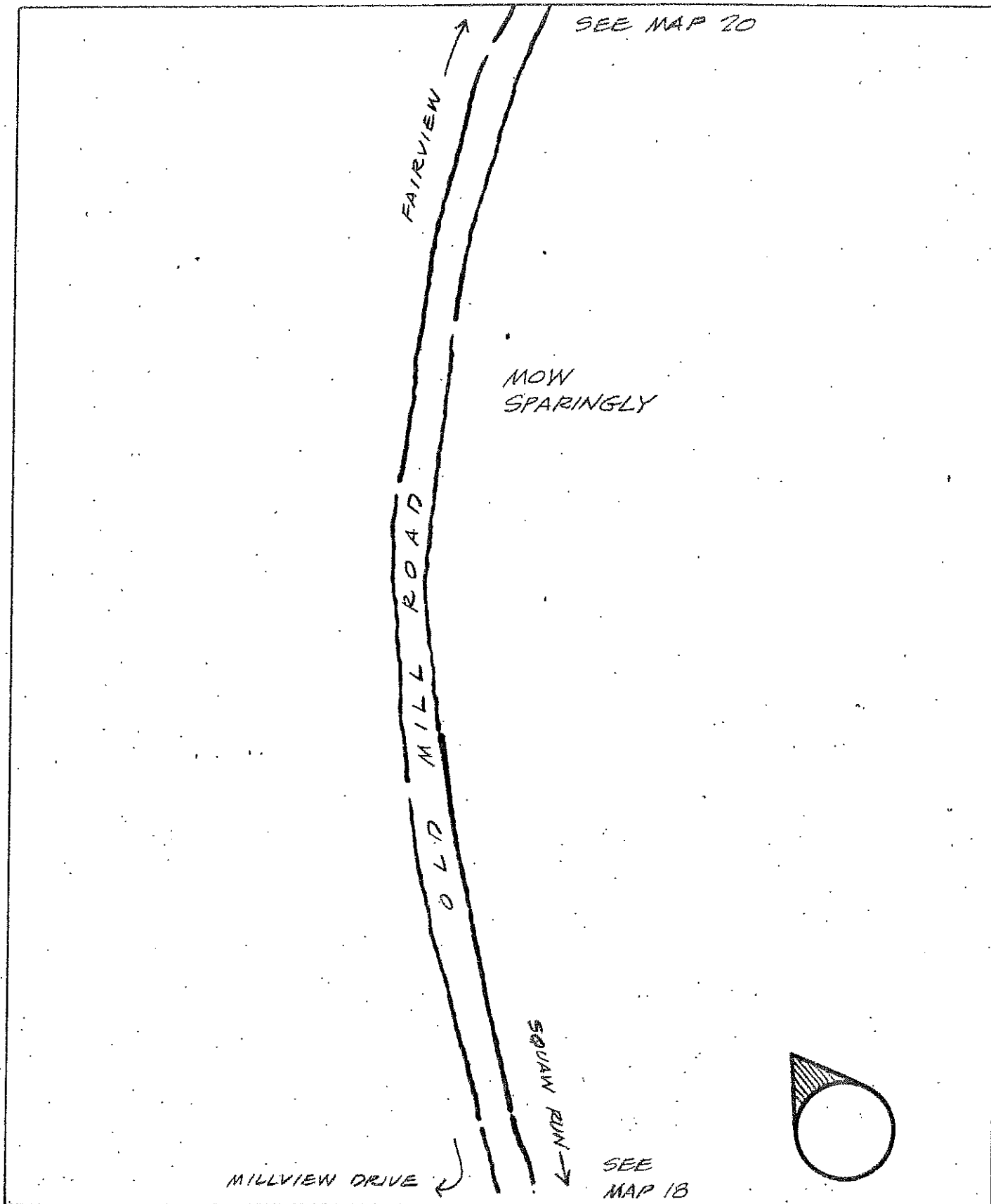
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MAP NO.

18

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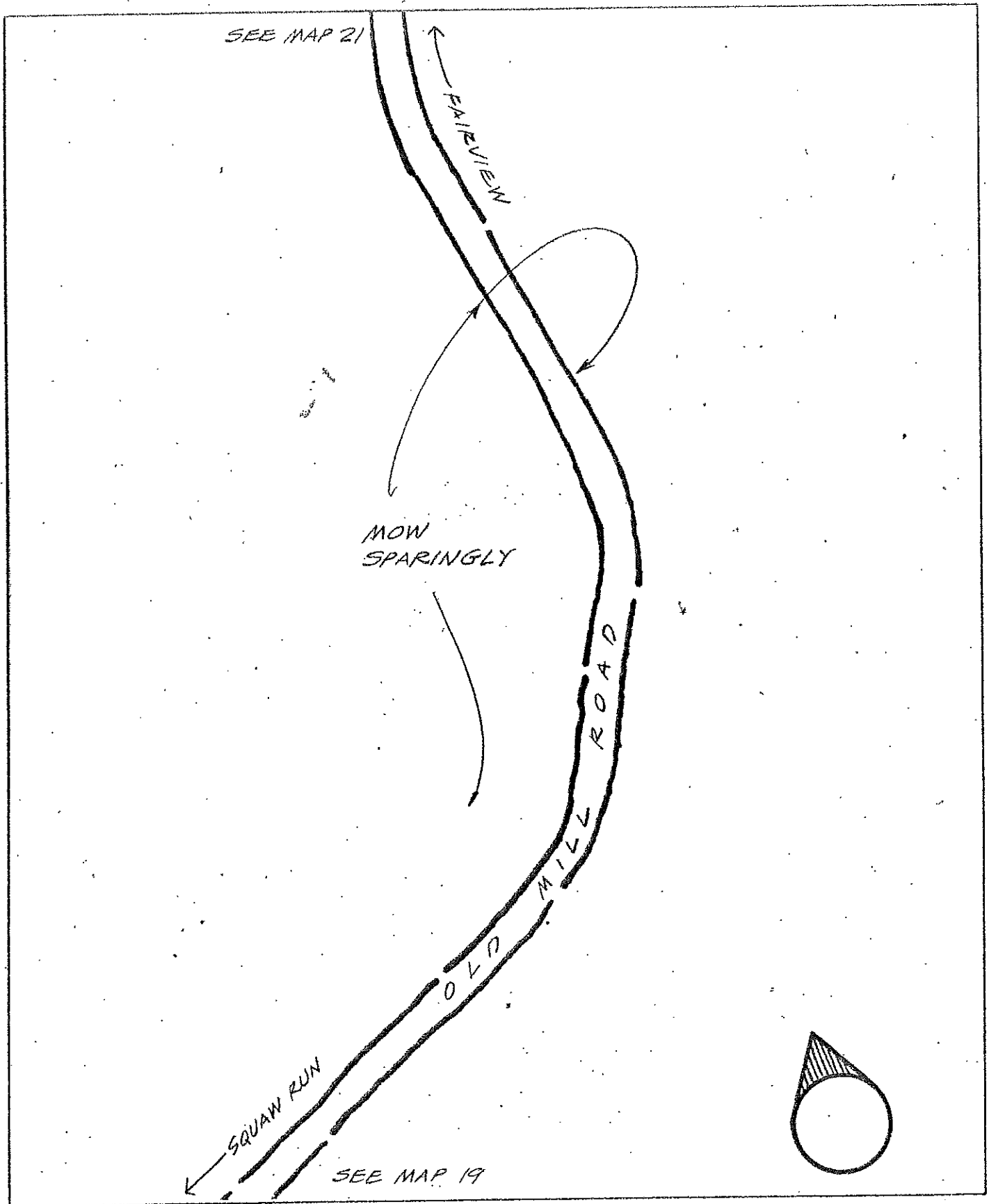
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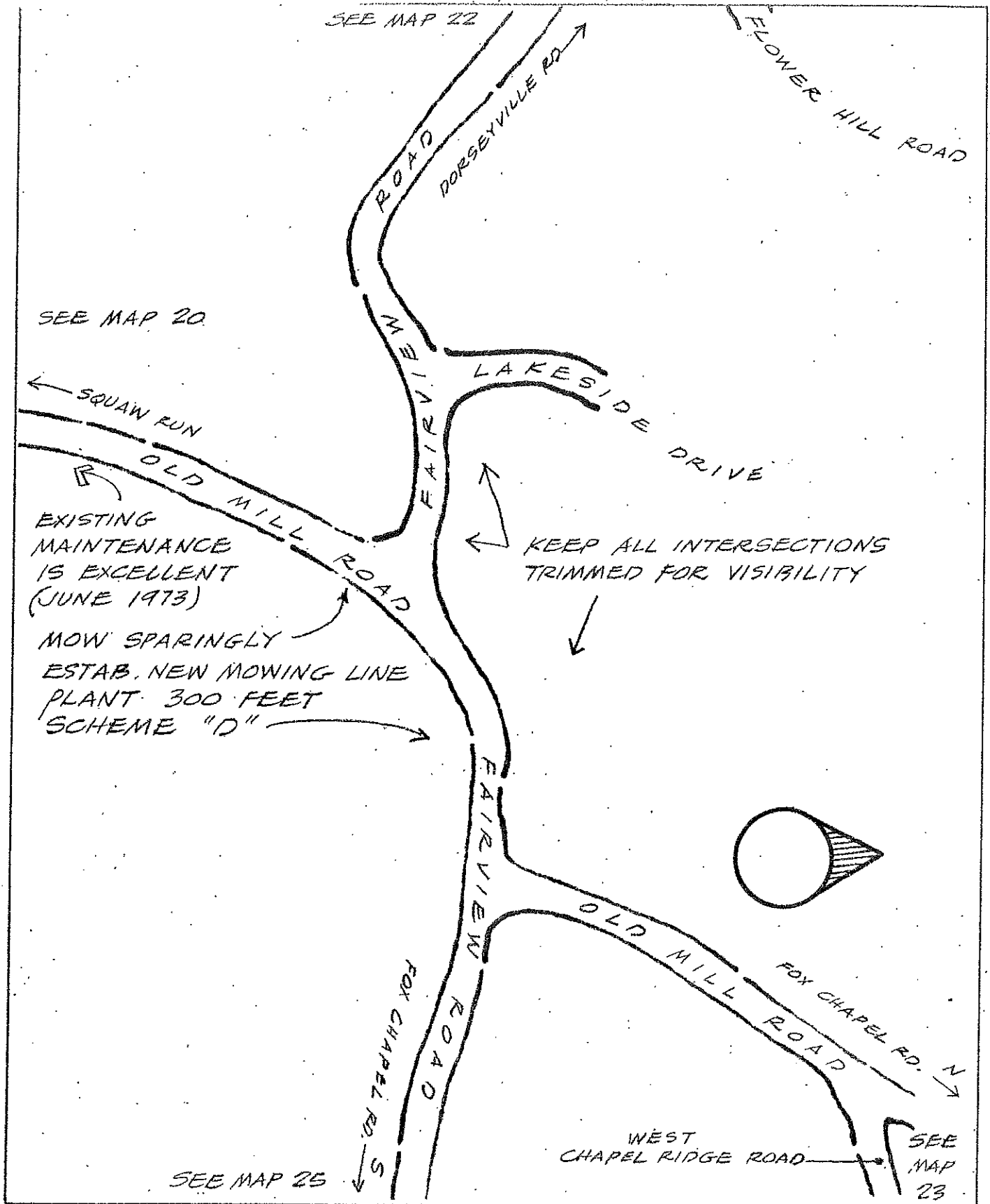
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FOX CHAPEL BOROUGH — MAINTENANCE GUIDE

MAP NO.

20



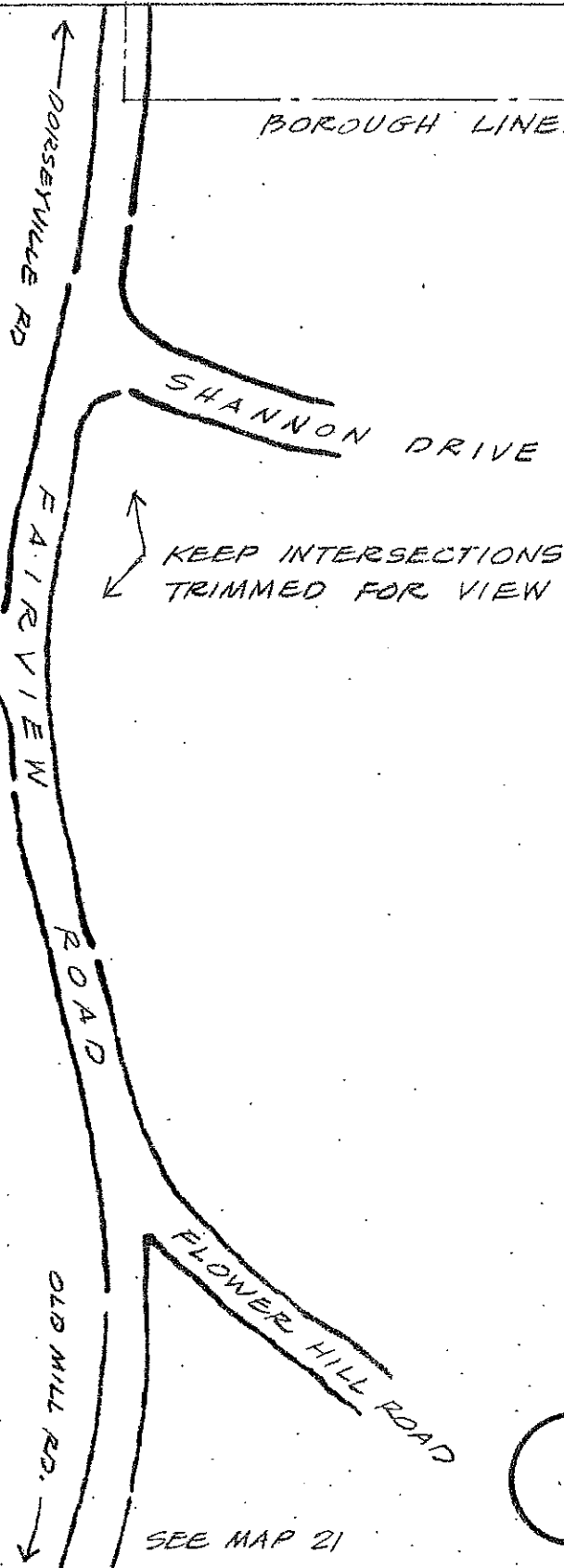
FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

MAP NO.

21

NOTE

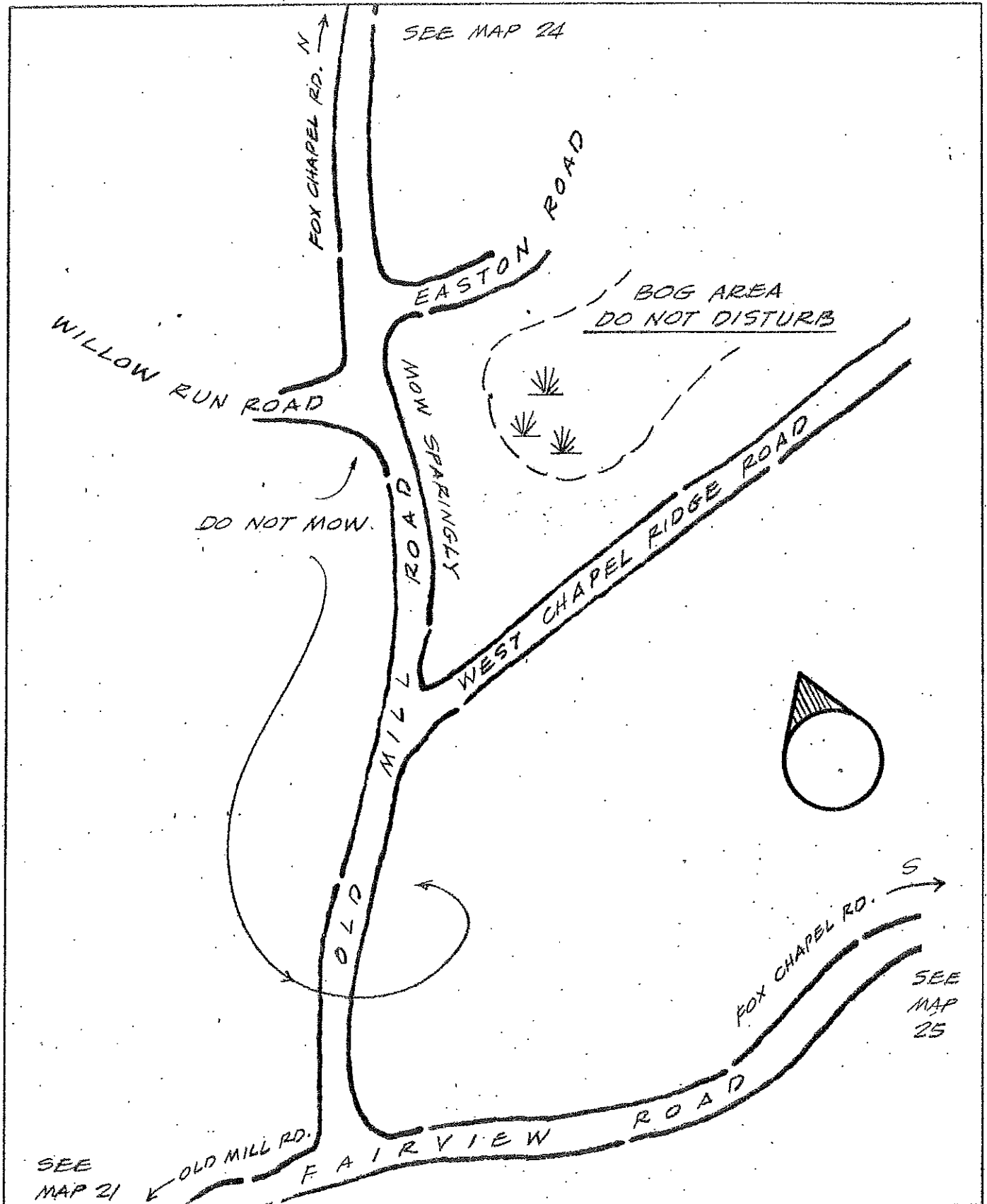
FIRE HOUSE SITE ON
DORSEYVILLE ROAD:
DISCONTINUE REGULAR
MOWING BELOW CREST.
PLANT "OPEN FIELD"
TREES & SHRUBS AT
NORTH AND EAST. DO
NOT MOW PLANTED
AREAS. MOW OTHER
PORTIONS SPARINGLY.



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MAP NO.

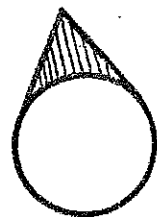
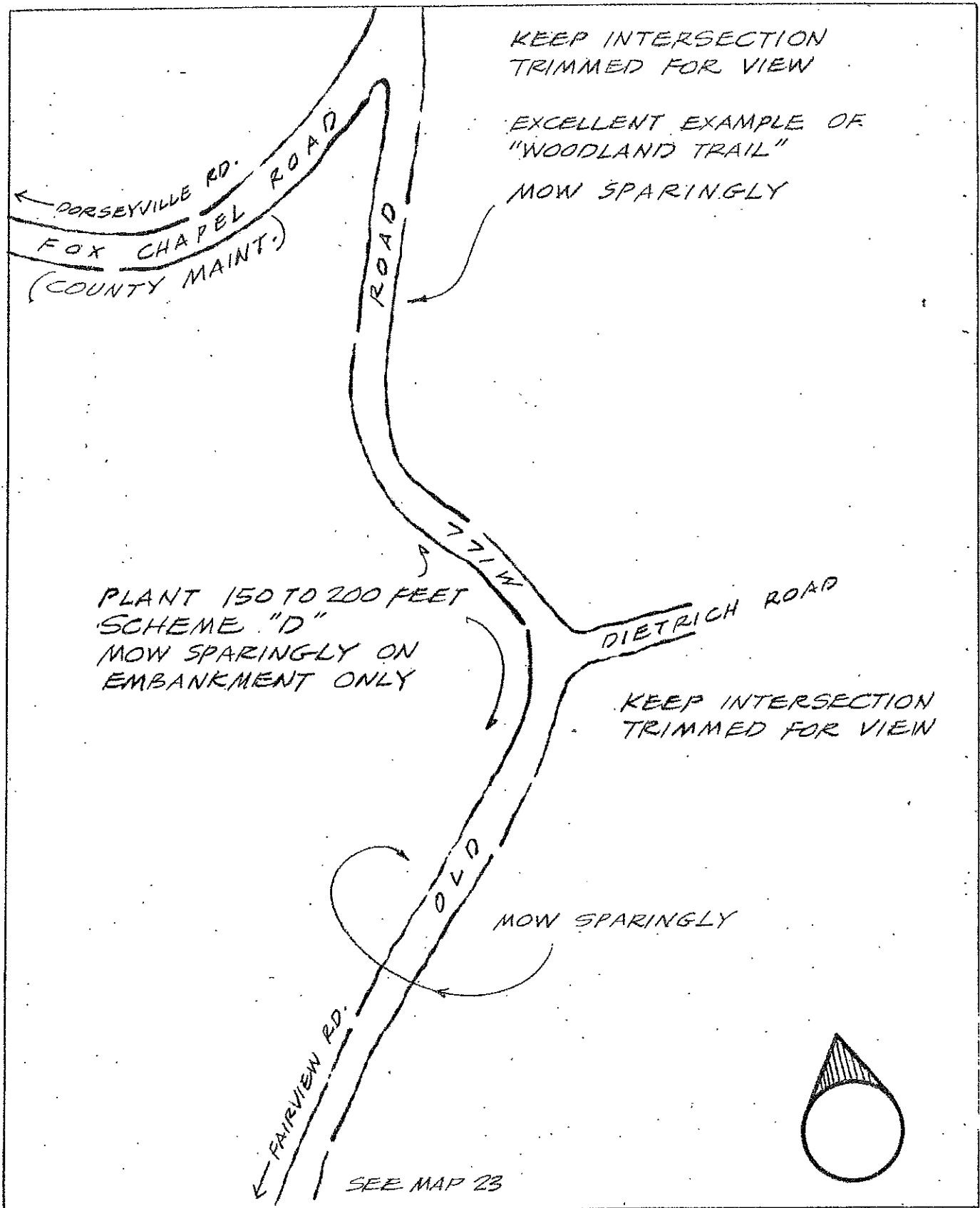
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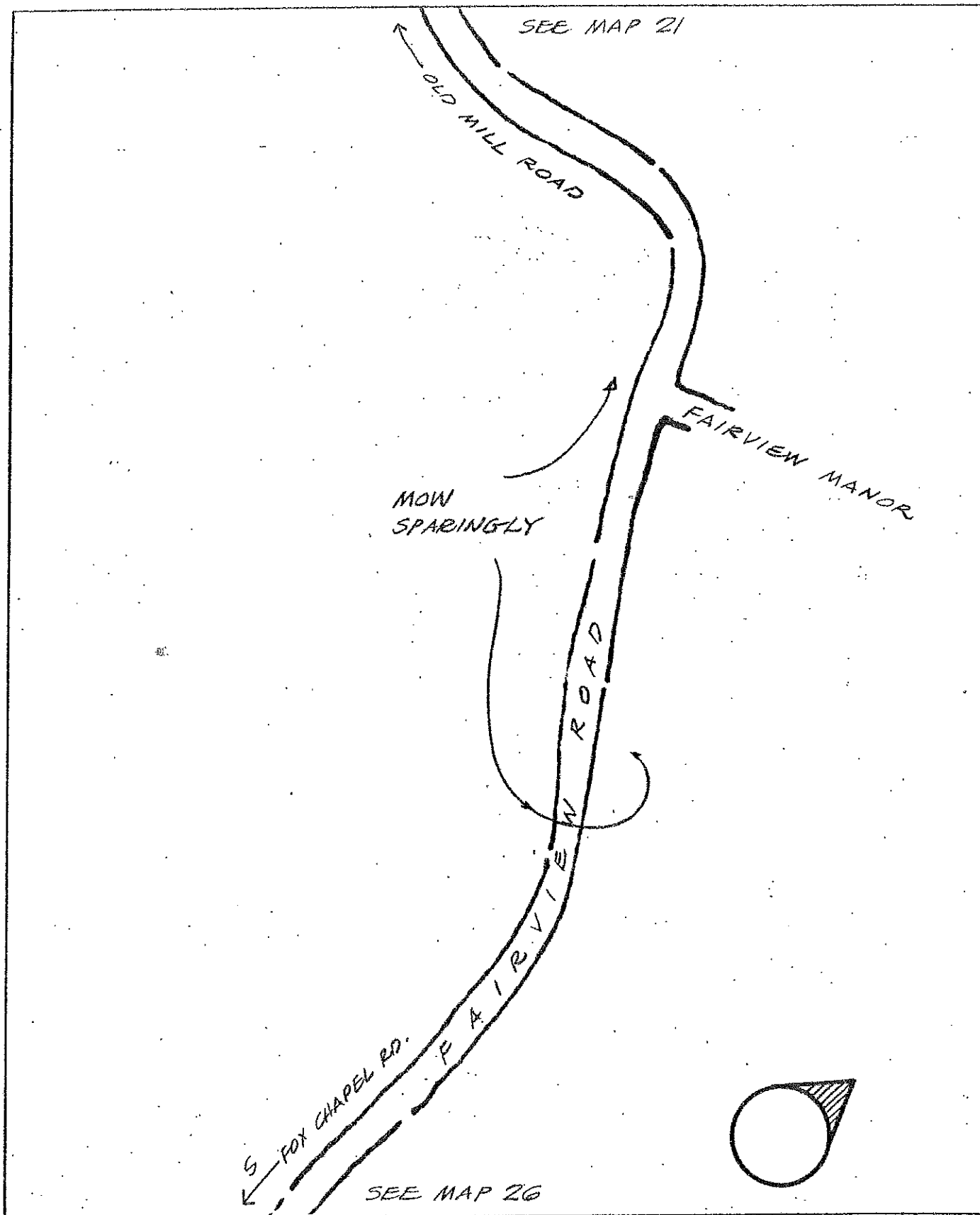
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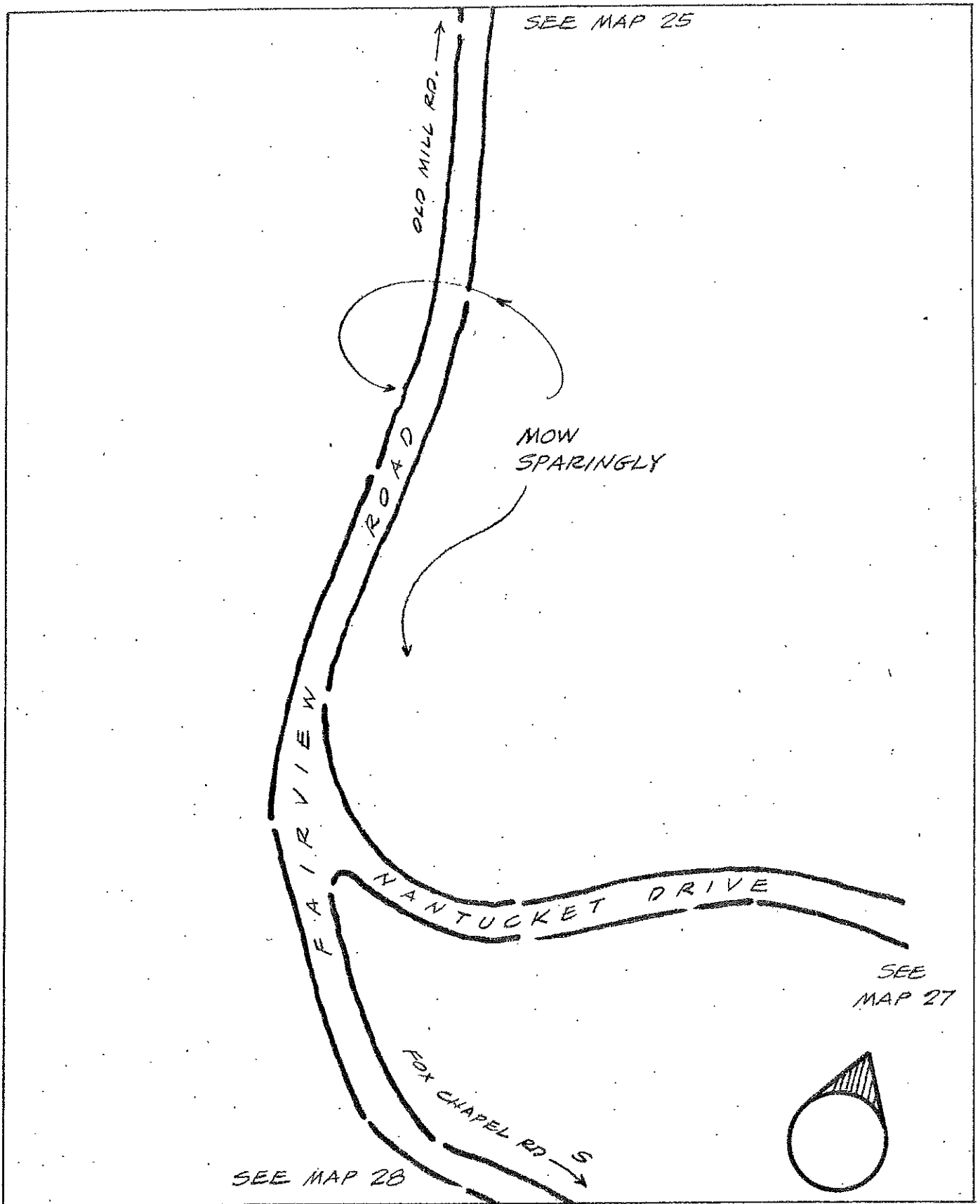
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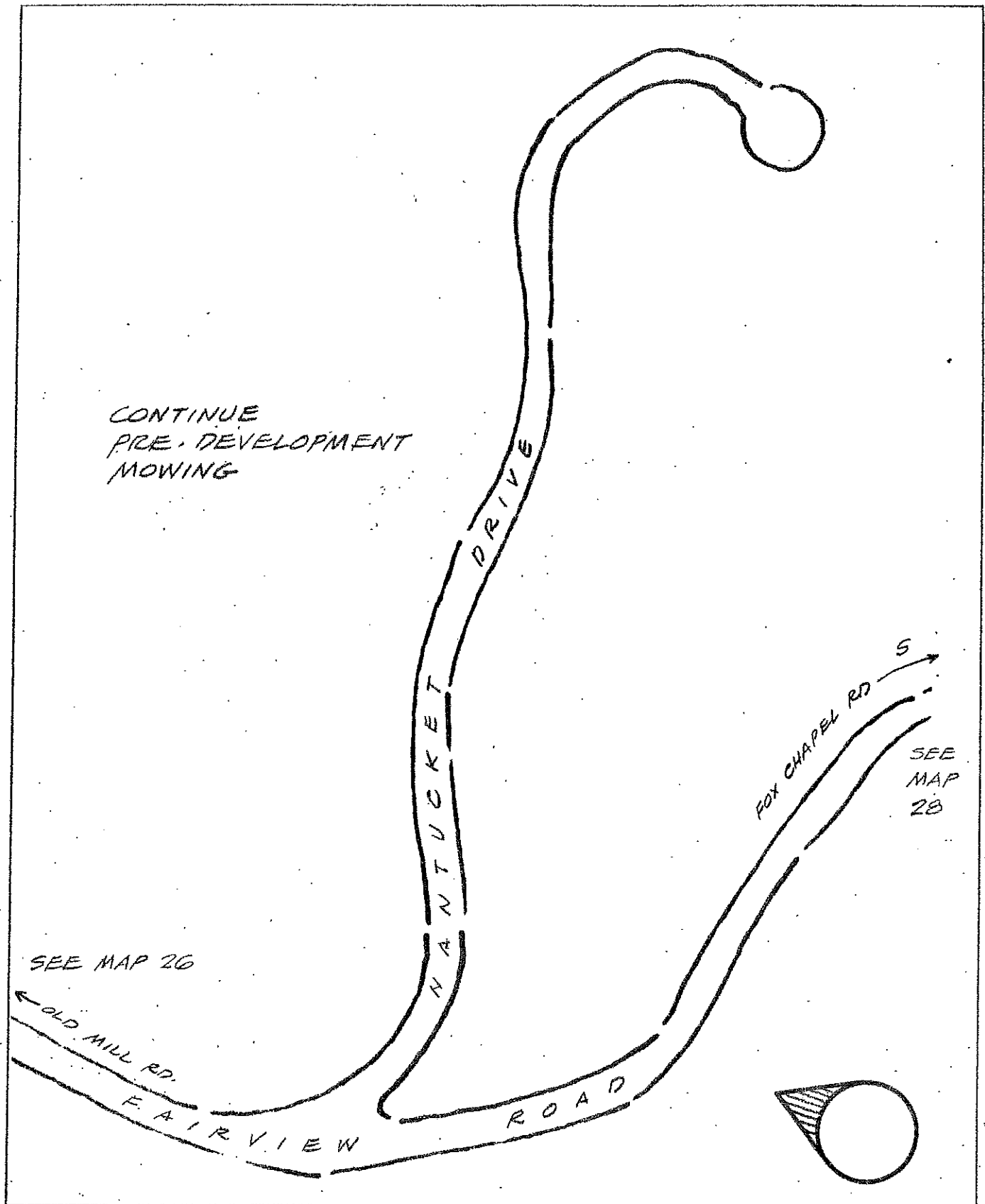
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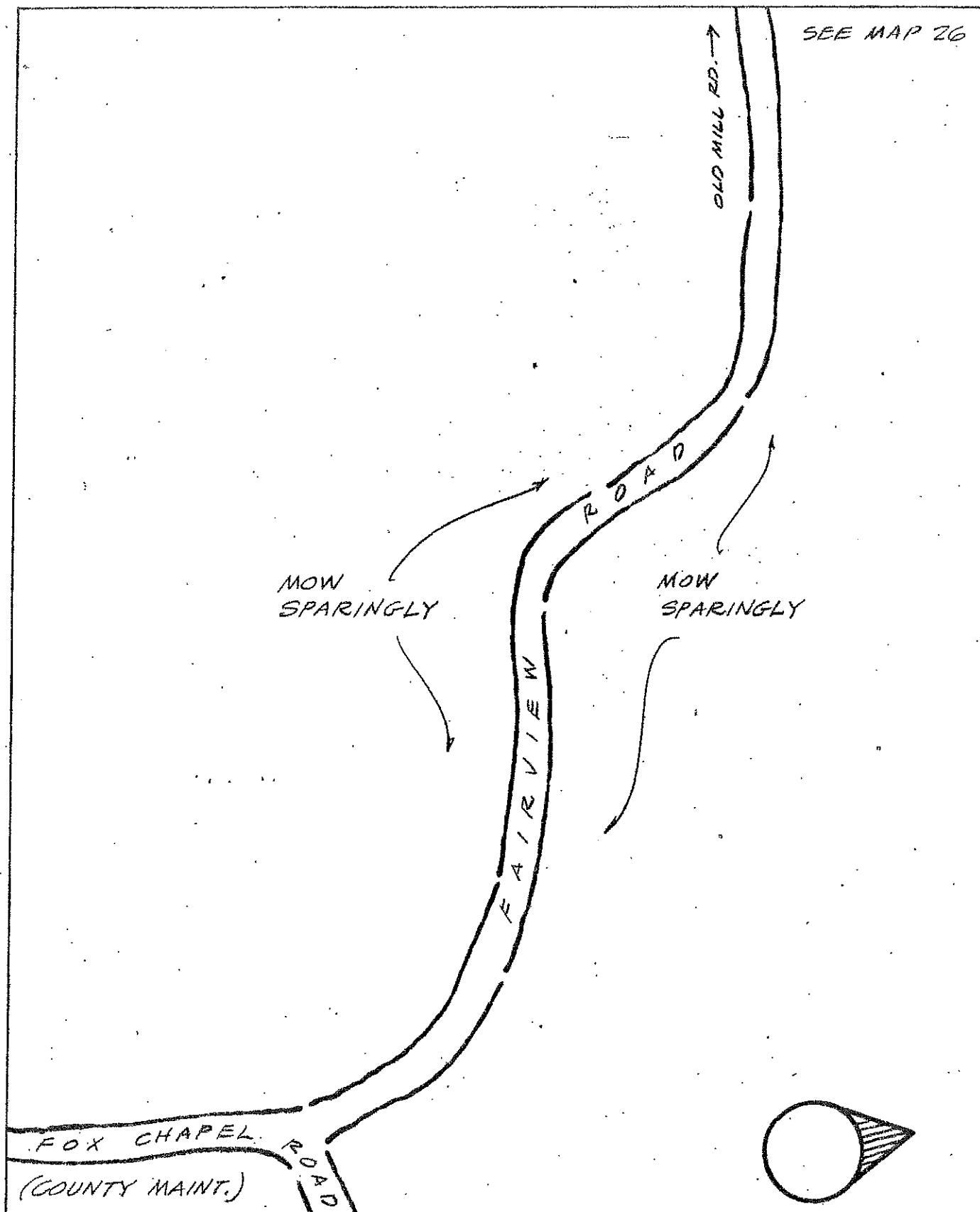
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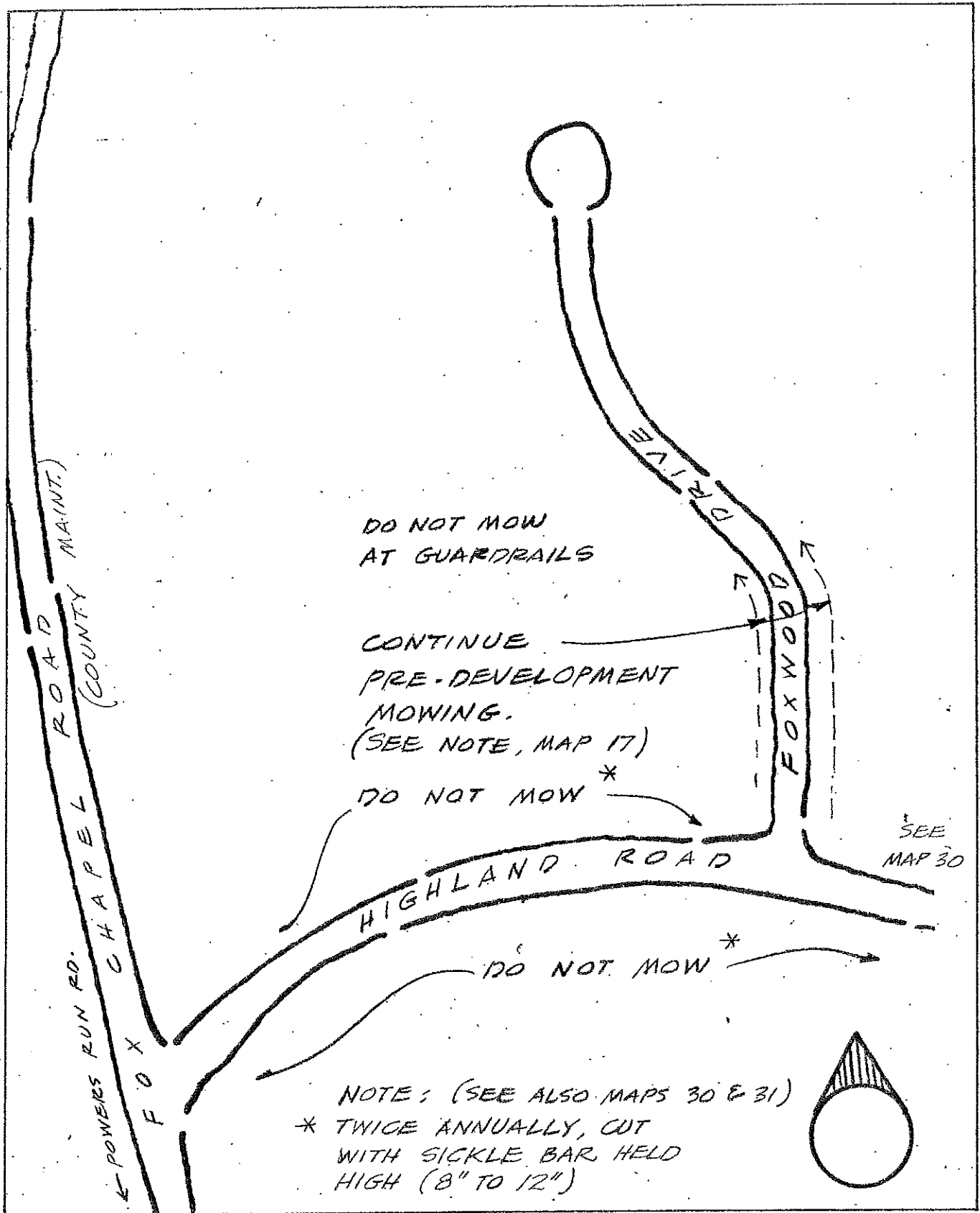
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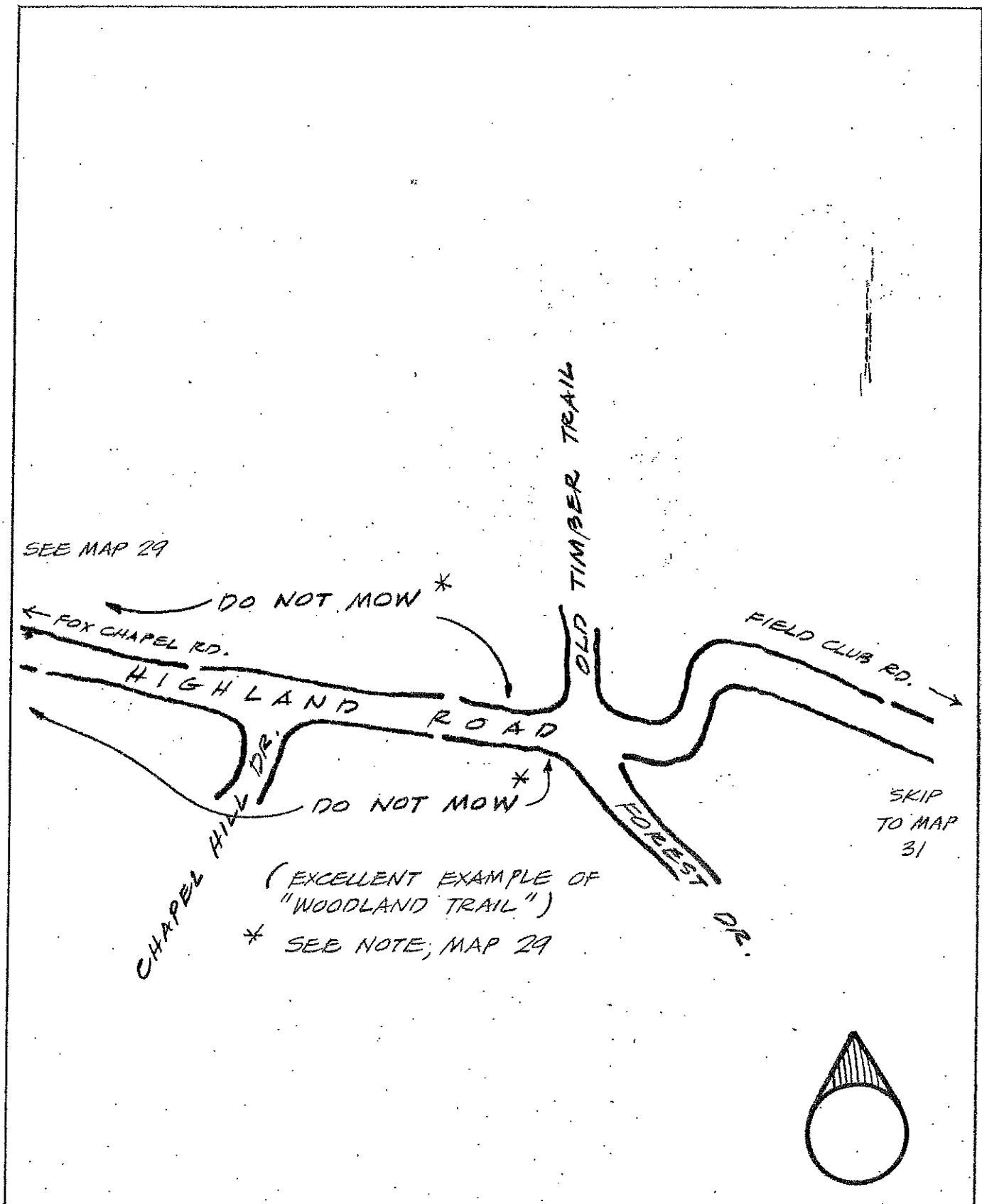
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FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

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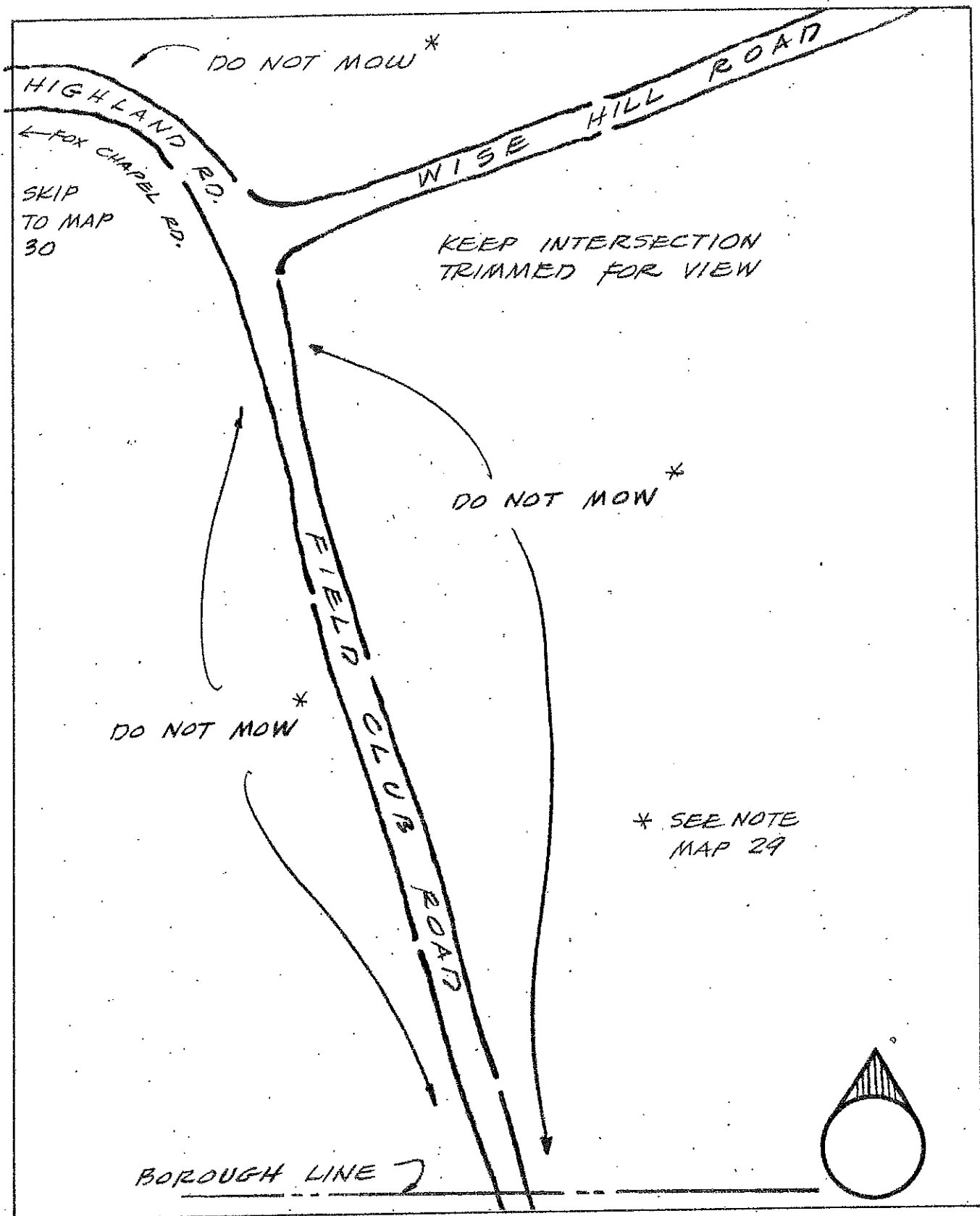
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FOX CHAPEL BOROUGH — MAINTENANCE GUIDE

MAP NO.

30



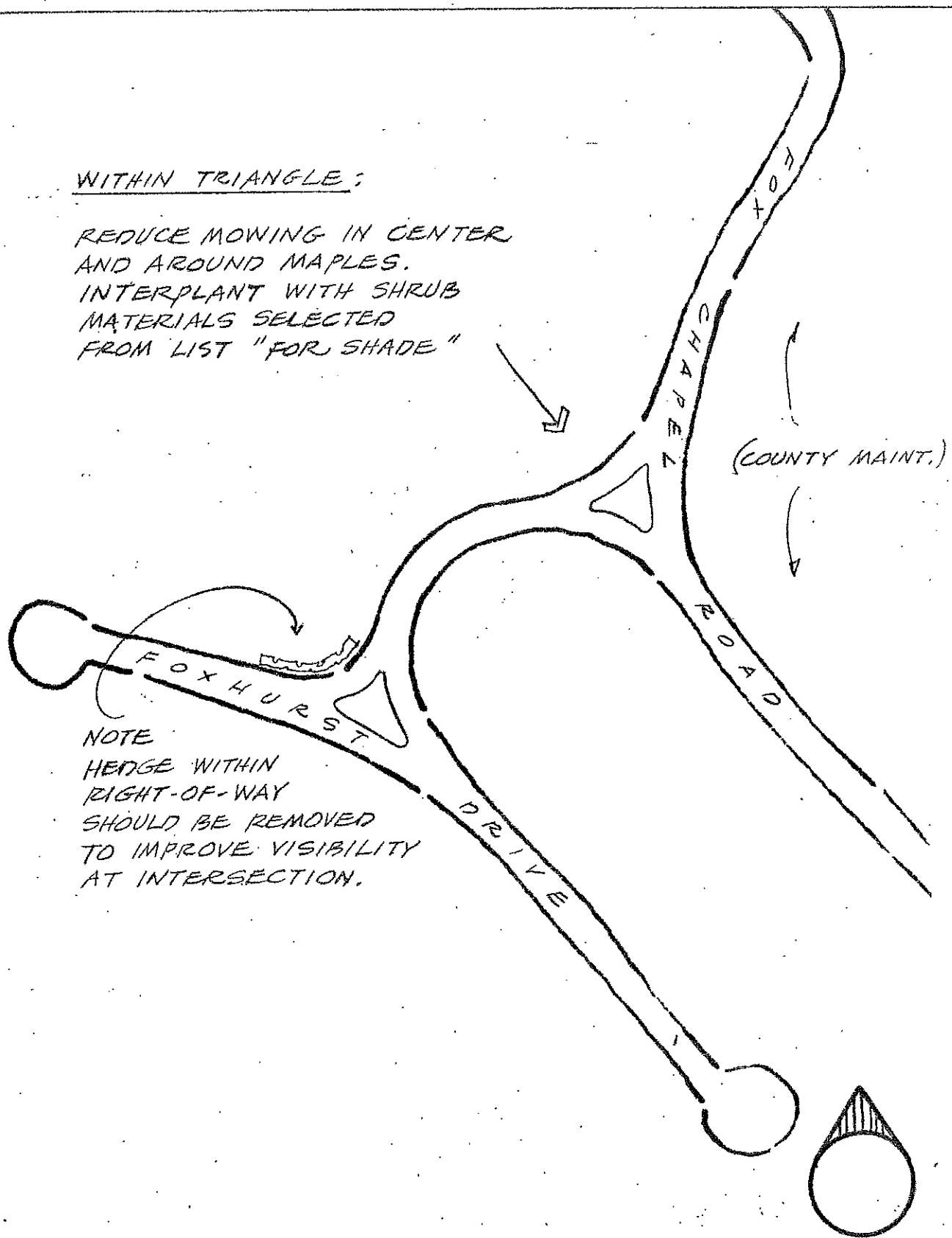
FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

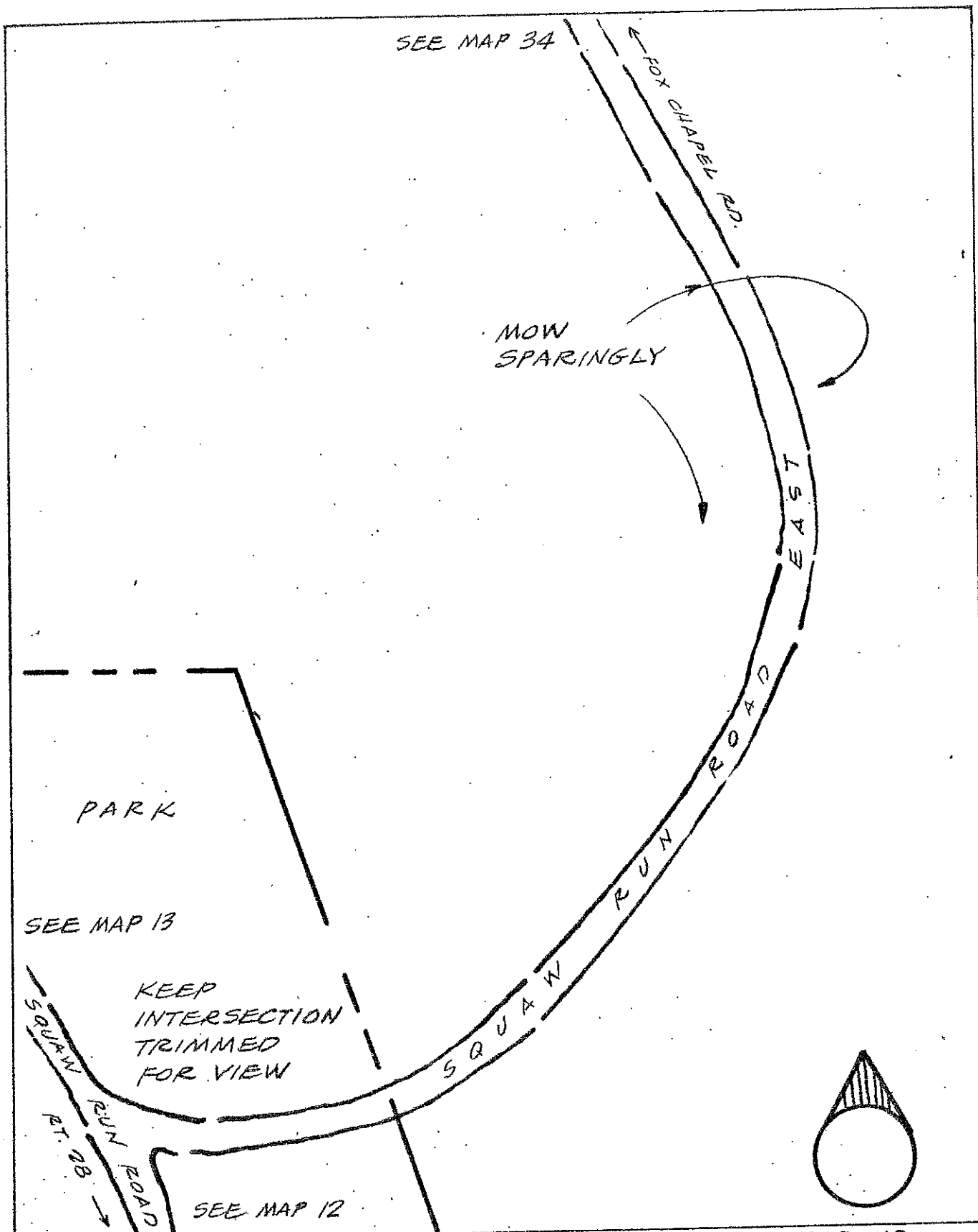
MAP NO.

31

WITHIN TRIANGLE:

REDUCE MOWING IN CENTER
AND AROUND MAPLES.
INTERPLANT WITH SHRUB
MATERIALS SELECTED
FROM LIST "FOR SHADE"



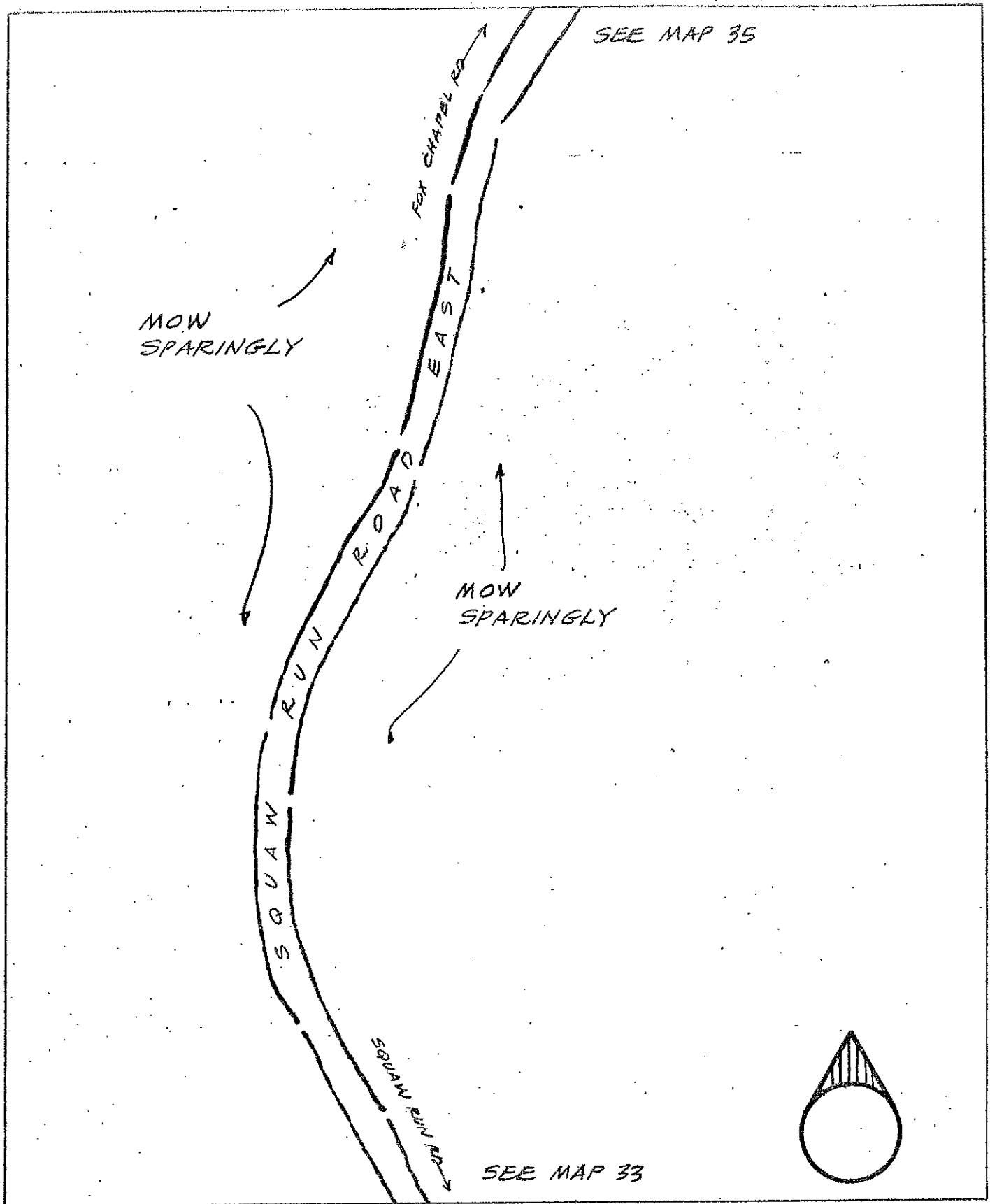


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MAP NO.

33

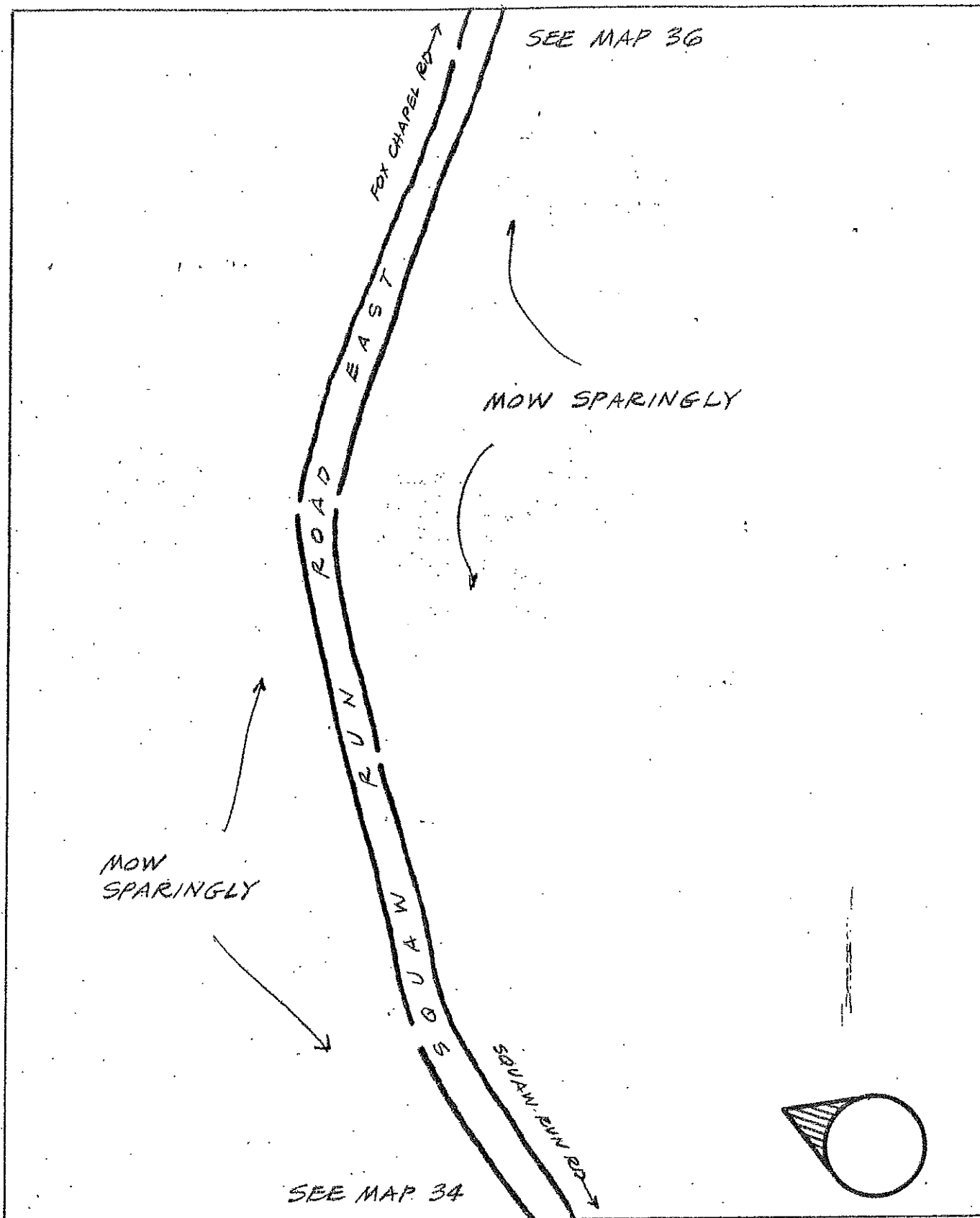
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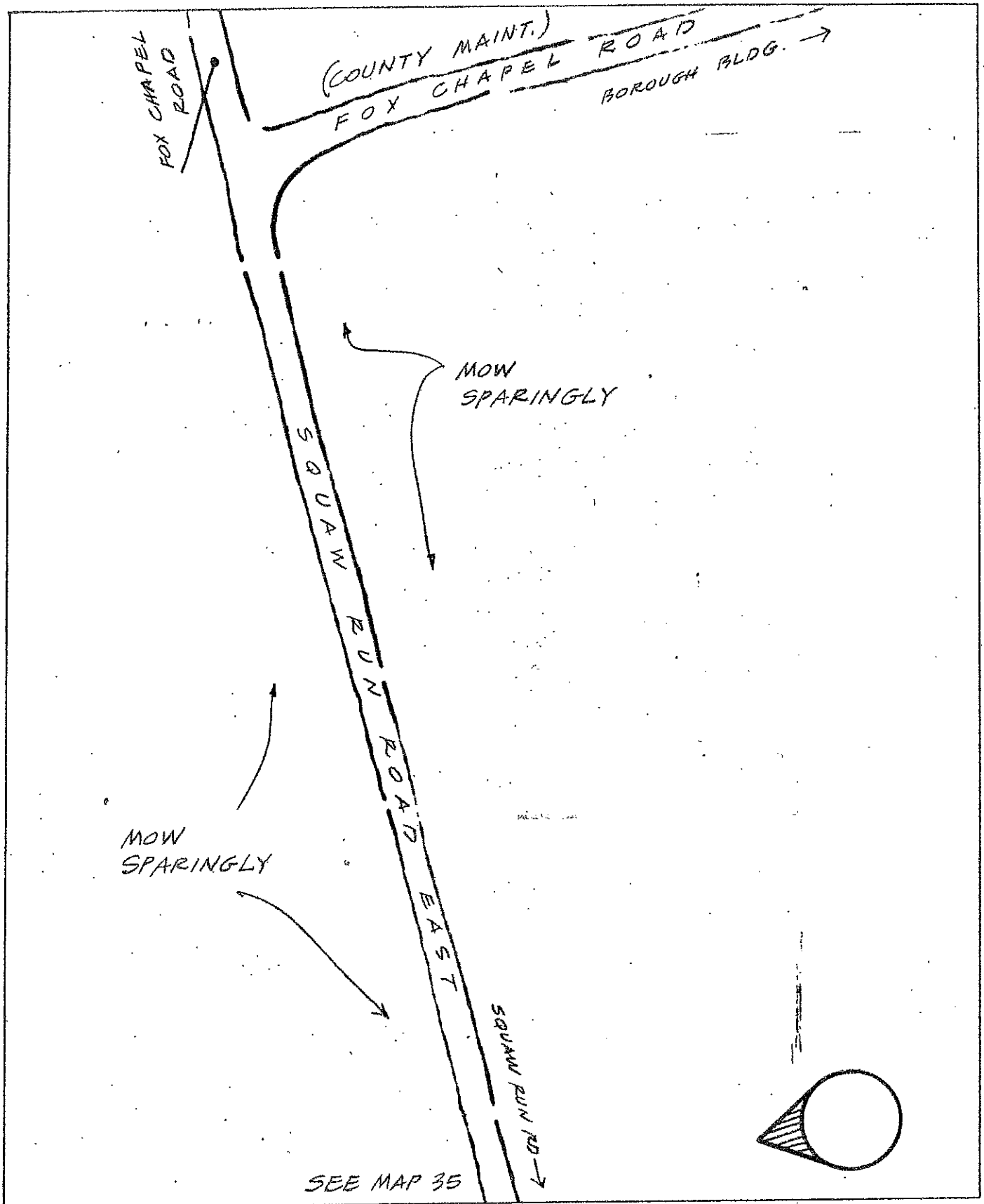
34



FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

MAP NO.

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MAP NO.

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The drawings in this section of the Guide are intended to show "typical" planting schemes which are adaptable to these situations:

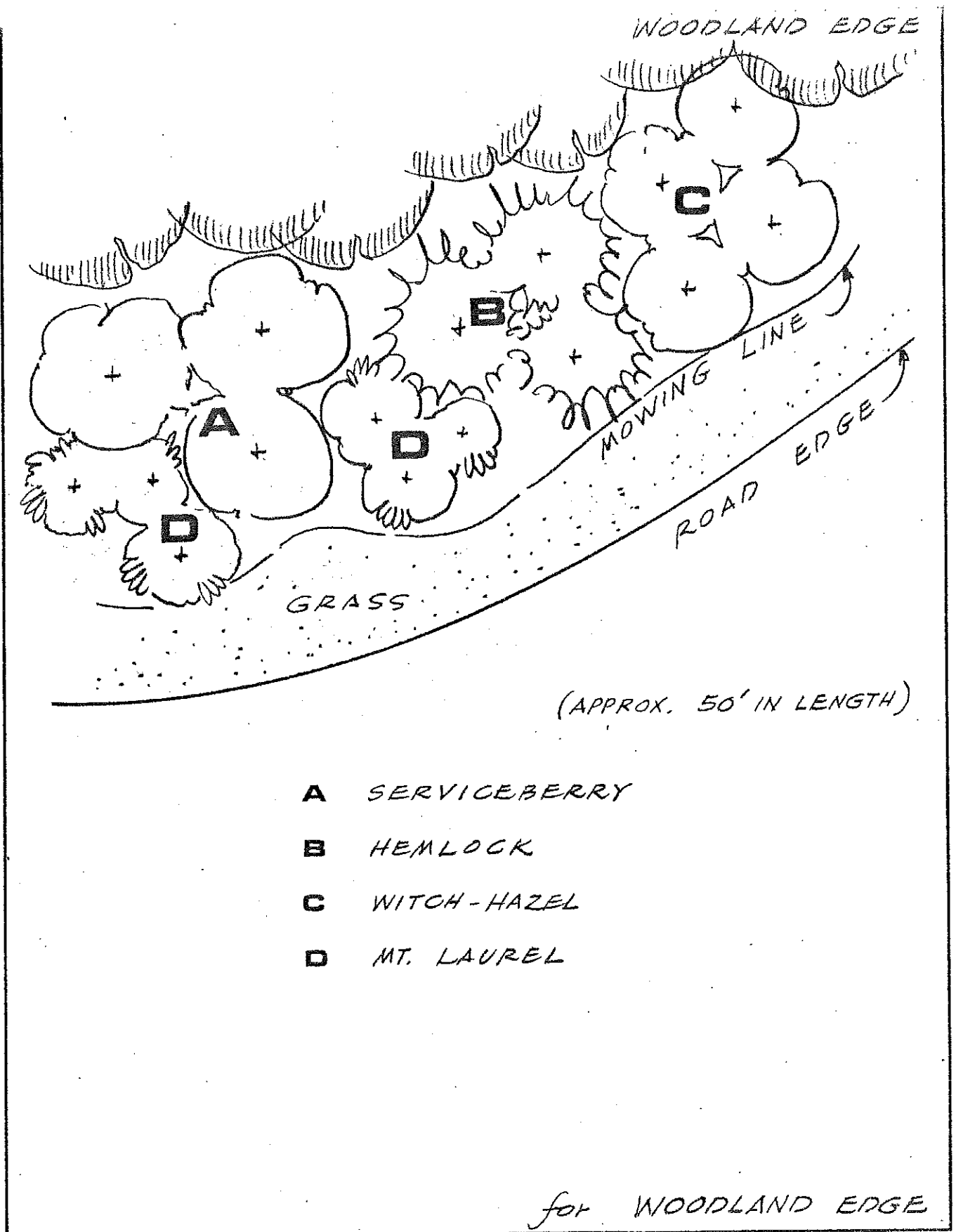
- A. Woodland Edge
- B. Shade
- C. Moist Areas
- D. Open Field

Other combinations of plants can be selected from the lists in the last section.

In each instance, the first drawing in a set of two shows the desired ultimate number and spread of the plants within a "unit" approximating 50 feet in length and 20 to 25 feet in depth. The suggestion of a curvilinear mowing line is also indicated.

The second drawing in each of the four sets, designated by the number "2", shows how many plants should be grouped to achieve the desired ultimate number. Please refer to the next section for a discussion of expected mortality. Each scheme shows an alternative of planting larger trees for key, initial impact.

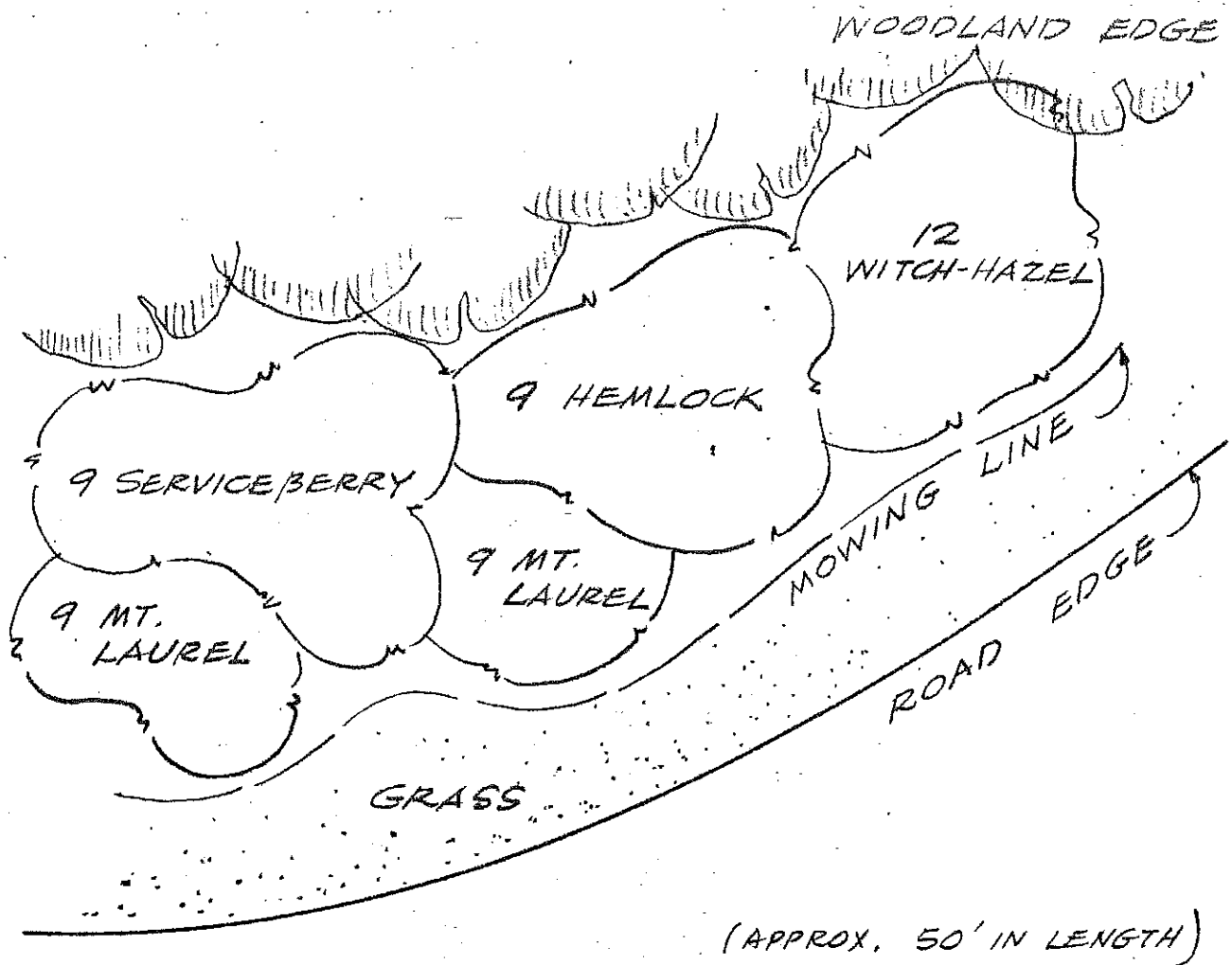
The approximate costs of each method are estimated as of 1973.



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SKETCH NO.





21 SHRUB TRANSPLANTS 12"-18" 1.00 \$ 21.00
 (Serviceberry, Witch-Hazel)

9 HEMLOCK TRANSPL. 8"-10" 1.00 9.00

18 MT. LAUREL " 8"-10" 2.00 36.00

\$ 66.00

ALTERNATE : PLANT LARGER HEMLOCK :

3 HEMLOCK 4' 15.00 45.00
 (Less cost of 9 Hemlock Transp) - 9.00

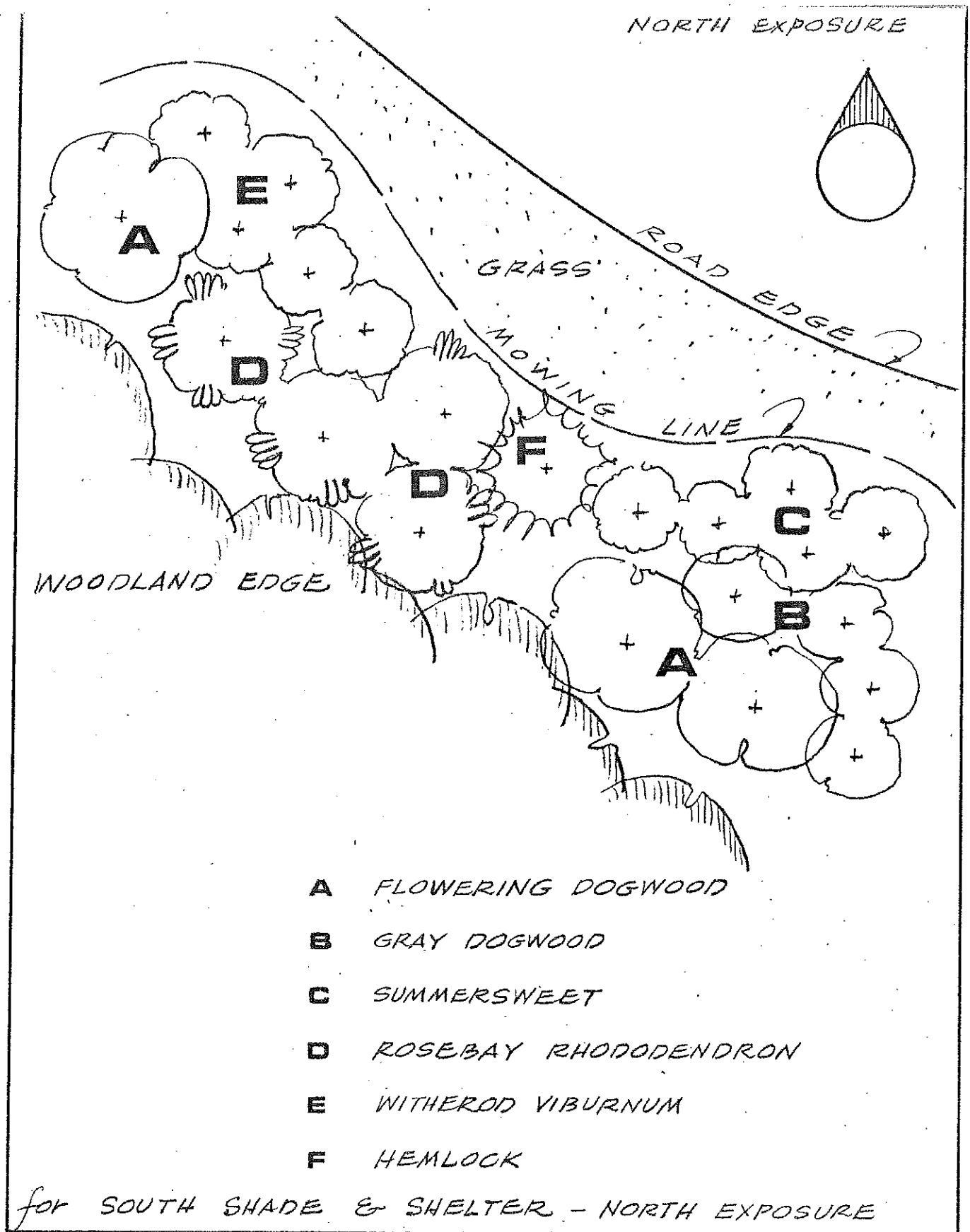
\$ 102.00

for WOODLAND EDGE

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SKETCH NO.



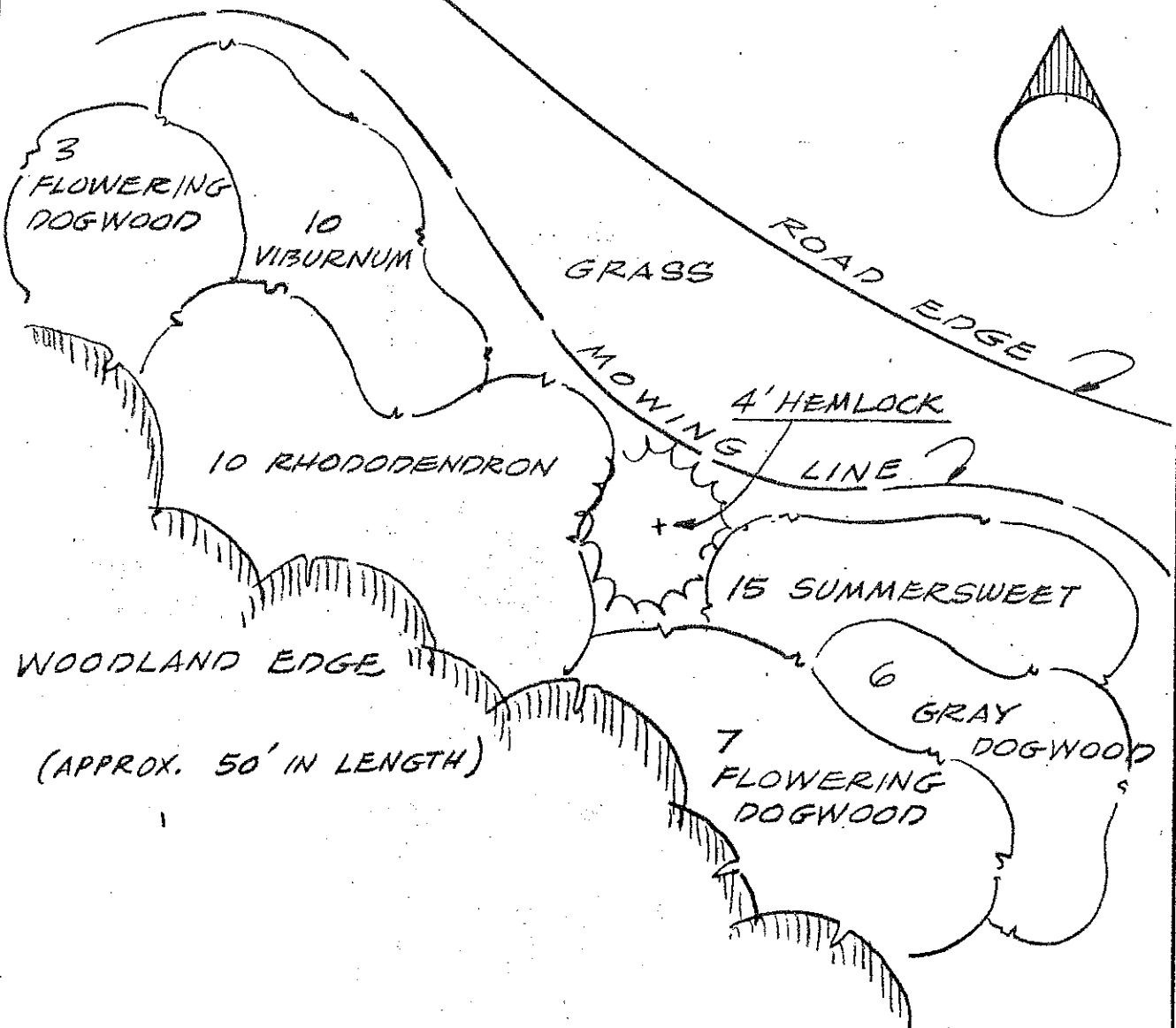


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SKETCH NO.



NORTH EXPOSURE



41	TRANSPLANTS	18"-24"	1.00	\$ 41.00
	(Fl. Dogwood, Gray Dogwood, Viburnum, Summersweet)			
10	RHODODENDRON	18"-24"	2.00	20.00
1	HEMLOCK	4'	15.00	15.00
				<u>\$ 76.00</u>

ALTERNATE : PLANT LARGER FL. DOGWOOD :

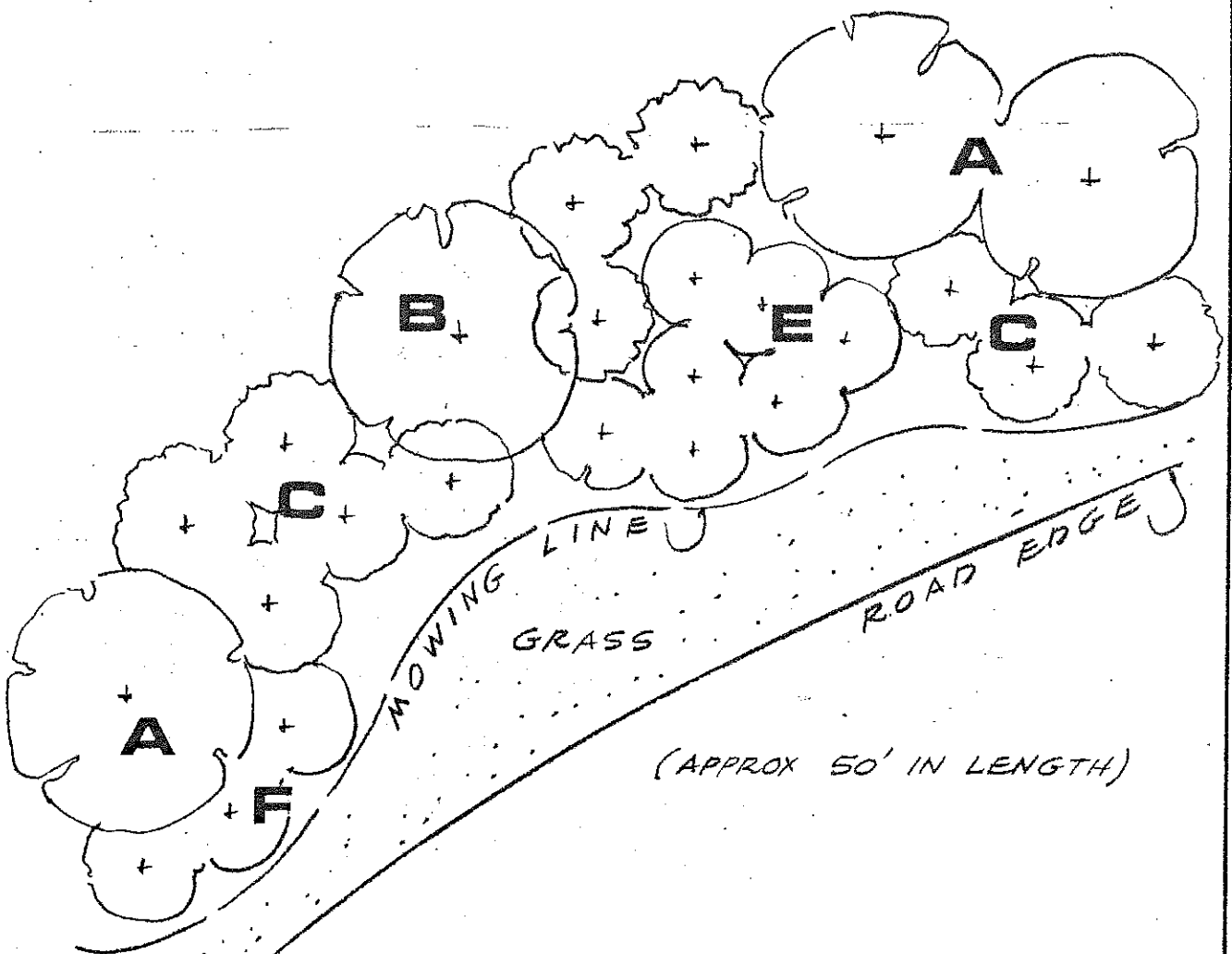
3	FL. DOGWOOD	3'-4'	10.00	30.00
	(Less cost of 10 transp.)			<u>- 10.00</u>
				\$ 96.00

for SOUTH SHADE & SHELTER - NORTH EXPOSURE

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SKETCH NO.





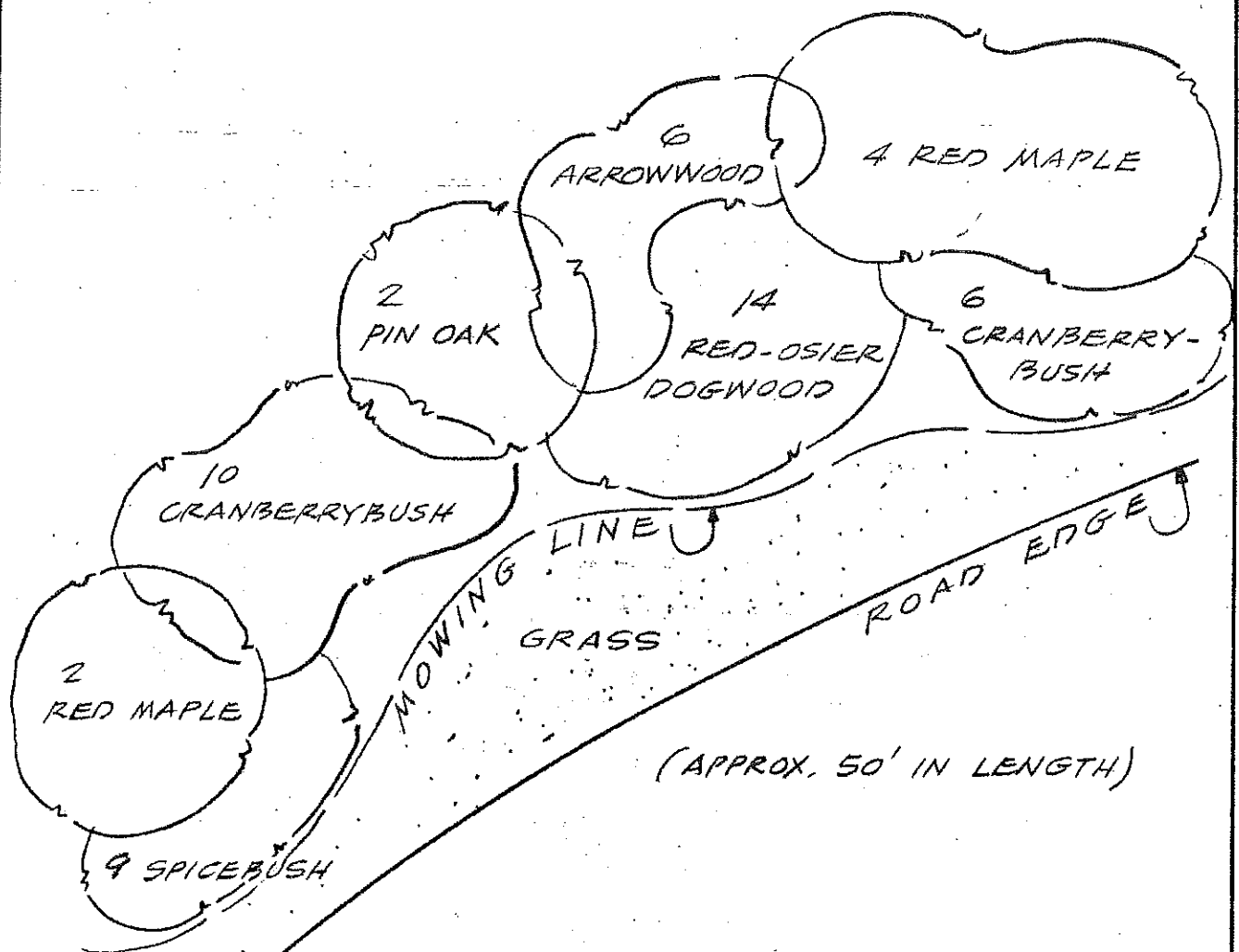
- A RED MAPLE
- B PIN OAK
- C AMER. CRANBERRYBUSH
- D ARROWWOOD
- E RED-OSIER DOGWOOD
- F SPICEBUSH

for MOIST AREAS, SUN OR SHADE

FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

SKETCH NO.





45 SHRUB TRANSPLANTS 12"-18" 1.00 \$ 45.00
 (spicebush, Cranberrybush,
 Arrowwood, R-O Dogwood)

8 TREE TRANSPLANTS 2'-3' 2.00 16.00
 \$ 61.00

ALTERNATE: PLANT LARGER TREES:

3 RED MAPLE 5'-6' 15.00 45.00
 1 PIN OAK 5'-6' 15.00 15.00

(Less cost of 8 TRANSP.) -16.00
 \$ 105.00

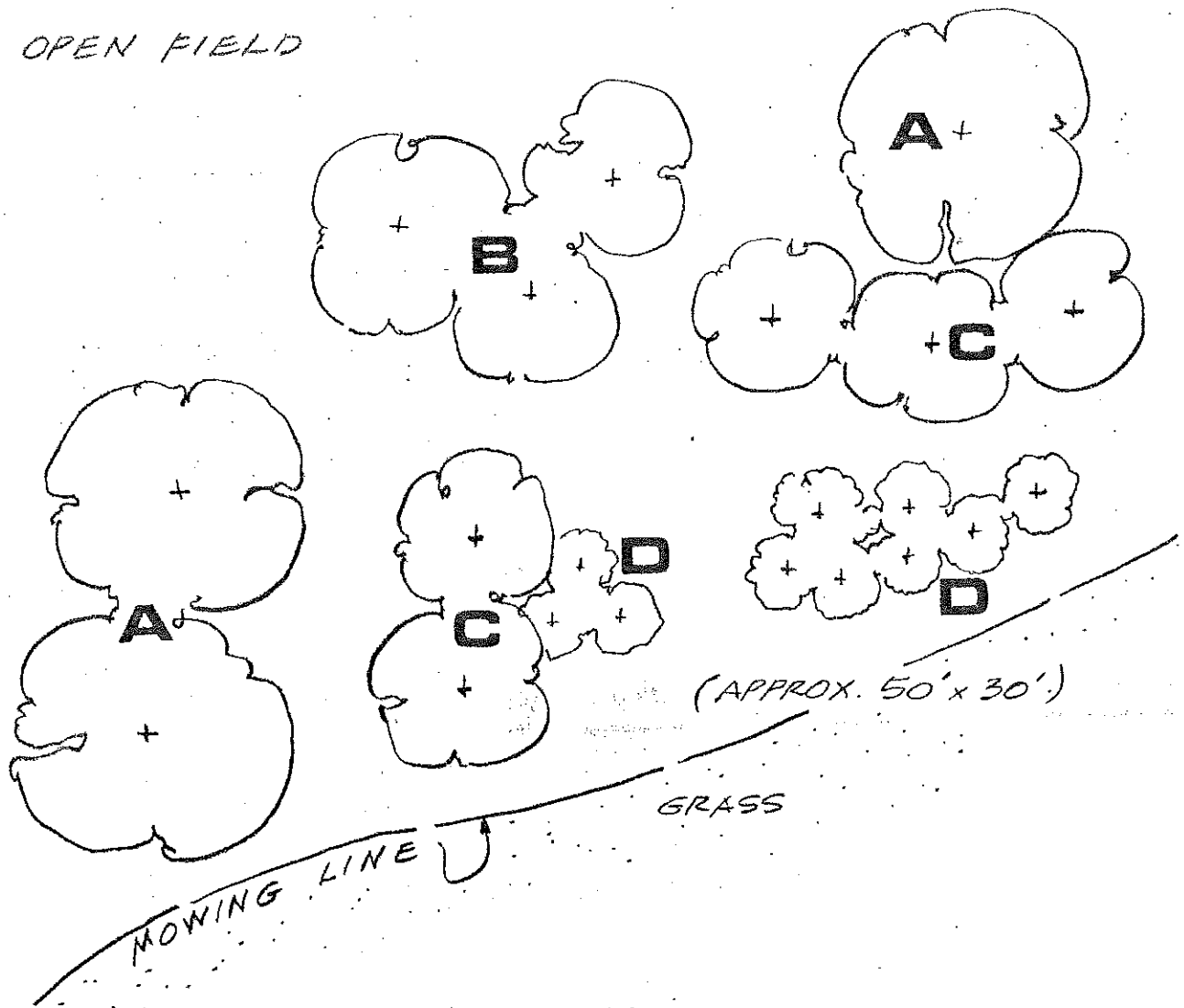
for MOIST AREAS, SUN OR SHADE

FOX CHAPEL BOROUGH - MAINTENANCE GUIDE

SKETCH NO.



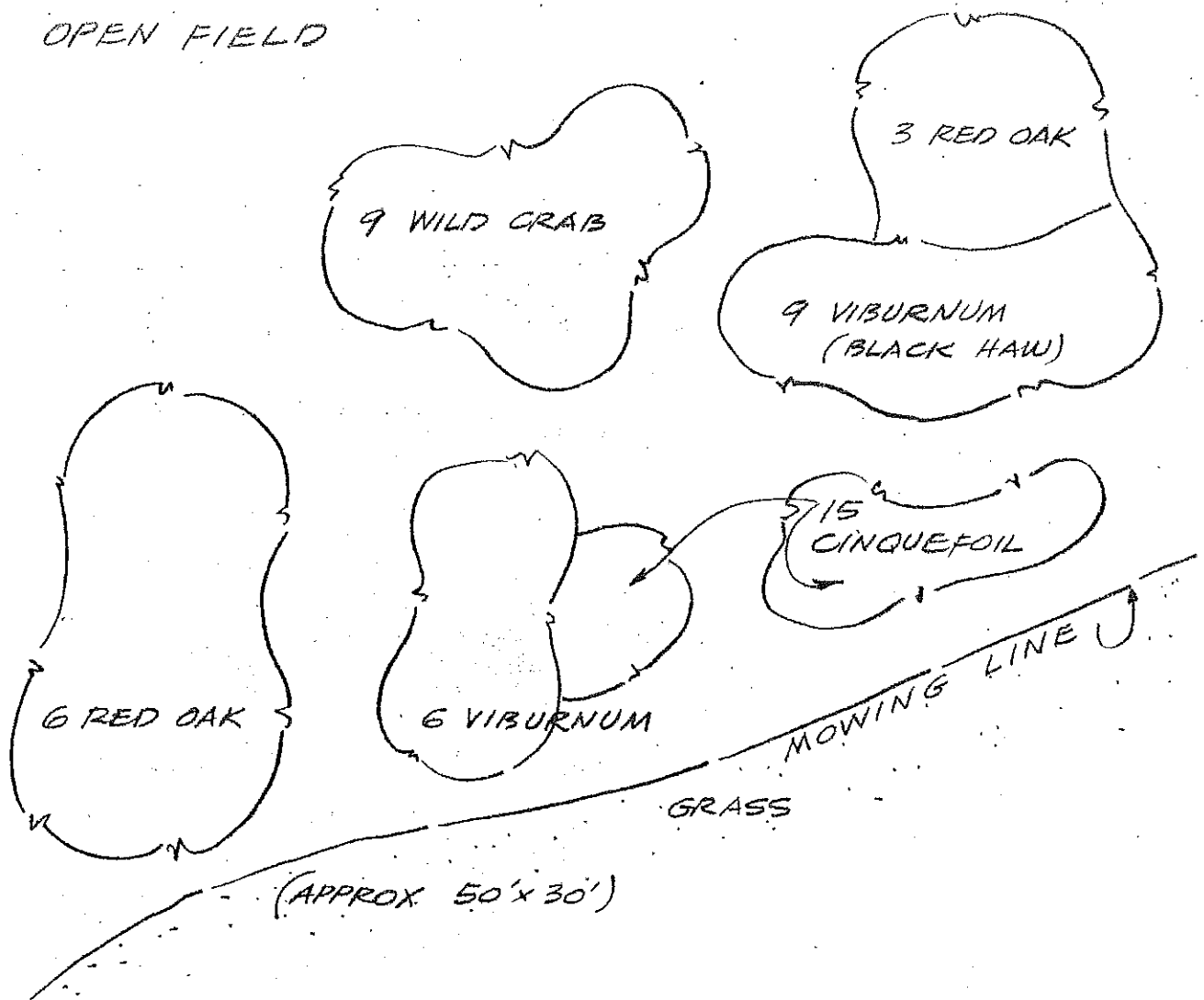
OPEN FIELD



- A RED OAK
- B WILD SWEET CRAB
- C BLACK HAW VIBURNUM
- D BUSH CINQUEFOIL



OPEN FIELD



30 SHRUB TRANSPLANTS	12"-18"	\$1.00	\$30.00
9 CRAB	2'-3'	2.00	18.00
9 RED OAK	2'-3'	2.00	18.00
			<u>66.00</u>

ALTERNATE : PLANT LARGER RED OAK :

3 RED OAK	5'-6' B&B	15.00	45.00
(LESS COST OF 9 TRANSP.)			- 18.00
			<u>\$ 93.00</u>



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The plant lists which follow:

Small Trees
Shrubs
Herbaceous Plants

for each of these situations:

Woodland Edge
Shade
Moist Areas
Open Field

show recommended sizes and estimated 1973 costs.

The "Expected Mortality or Thinning Ratio" represents our judgment concerning how many plants should be planted (at these sizes) to attain a given ultimate number of plants. The ratios are based on average soil conditions without modification at time of planting. They are based on general "hardiness" of the specific plant considering that they will receive no special care.

To illustrate how to use these figures, take, for example, the first on the list of Small Trees for Woodland Edge.

Chionanthus virginicus
White Fringetree 18"-24" 1.25 .50 to .70

If it is desired to have 7 Fringetrees along a particular stretch of woodland, it will be advisable to plant more than that number to allow for expected mortality. To figure how many small trees (18"-24") should be purchased, consider that the range of expected mortality is between .50 and .70. This means that from half to nearly three-quarters (70% to be precise) of the young trees cannot be expected to live. If it is hoped that 7 living trees will result from the planting, then between 14 and 23 trees must be bought.

14 minus 50% of 14 (7) = 7
23 minus 70% of 23 (16) = 7

Assume it is decided to buy 20 trees. In 1973, an average price would be \$1.25 each or \$25.00 for the lot.

FOR WOODLAND EDGE

SMALL TREES

(revised 6/14/89)

Botanical Name Common Name	Size	Expected Mortality or Thinning Ratio
Chionanthus virginicus White Fringetree	18"-24"	.50 to .70
Cornus florida Flowering Dogwood	18"-24"	.60 to .80
Rhododendron maximum Rosebay Rhododendron		.50 to .70
Tsuga canadensis Canada Hemlock	6"-12"	.50 to .70

(added 6/14/89)

Amelanchier canadensis (single stem) Serviceberry	2'-3'	.50 to .70
Cercis canadensis Redbud	2'-3'	.40 to .60
Ostrya virginiana Eastern Hophornbeam		.50 to .70
Viburnum prunifolium (single stem) Black Haw	2'-3'	.40 to .60
Viburnum lentago Nannyberry	2'-3'	.40 to .60

FOR WOODLAND EDGE (cont.)

SHRUBS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning Ratio
Amelanchier canadensis (multi-stem) Serviceberry	2'-3'	.50 to .70
Cornus racemosa Gray Dogwood	10"-18"	.25 to .40
Hamamelis virginiana Witch-hazel	18"-24"	.50 to .70
Kalmia latifolia Mountain Laurel		.50 to .70
Lindera benzoin Spicebush		.40 to .60
Rhus aromatica Fragrant Sumac	12"-18"	.50 to .70

(added 6/14/89)

Aronia melanocarpa Black Chokeberry	12"-18"	.40 to .60
Viburnum acerifolium Mapleleaf Viburnum		.40 to .60
Viburnum cassinoides Witherod		.40 to .50
Viburnum prunifolium (multi-stem) Black Haw	2'-3'	.40 to .60

FOR WOODLAND EDGE (cont.)

HERBACEOUS PLANTS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	*Seeding <u>Rate</u>	Expected Mortality or Thinning <u>Ratio</u>
Actaea alba White Baneberry		.70 to .80
Actaea rubra Red Baneberry		.70 to .80
Adiantum pedatum Maidenhair Fern		.50 to .60
Anemone canadensis Windflower		.70 to .80
Aquilegia canadensis Columbine	1 lb./acre	.50 to .60
Asarum canadense Wild Ginger		.50 to .60
Aster cordifolius Heart-leaved Aster		.50 to .60
Clintonia borealis Bluebeads		.70 to .80
Phlox divaricata Blue Phlox		.50 to .60
Polygonatum biflorum Solomon's Seal		.50 to .60
Trillium grandiflorum Great Trillium		.60 to .70
Trillium erectum Purple Trillium		.60 to .70
Uvularia perfoliata Bellwort		.50 to .60

FOR WOODLAND-EDGE (cont.)

(added 6/14/89)

**Chrysanthemum leucanthemum 5 lbs./acre
Ox-eye Daisy

**Viola cornuta 5 lbs./acre
Johnny Jump-up

- * Seed is normally available from wildflower seed producers for the varieties where a seeding rate is indicated. The rate indicated is for a single variety "stand". If more than one variety is seeded, reduce the seeding rates for each variety in the mixture, correspondingly.
- ** Require strong filtered sunlight or 1-4 hours of direct sun per day.

FOR SHADE

SMALL TREES

(revised 6/14/89)

Botanical Name Common Name	Size	Expected Mortality or Thinning Ratio
Acer pensylvanicum Striped Maple		.50 to .70
Cercis canadensis Redbud	2'-3'	.40 to .60
Cornus florida Flowering Dogwood	18"-24"	.60 to .80
Rhododendron maximum Rosebay Rhododendron		.50 to .70
Tsuga canadensis Canada Hemlock	6"-12"	.50 to .70

(added 6/14/89)

Amelanchier canadensis (single stem) Serviceberry	2'-3'	.50 to .70
Ostrya virginiana Eastern Hophornbeam		.40 to .60
Viburnum prunifolium (single stem) Black Haw	2'-3'	.40 to .60

FOR SHADE (cont.)

SHRUBS

(revised 6/14/89)

Botanical Name Common Name	Size	Expected Mortality or Thinning Ratio
Amelanchier canadensis (multi-stem) Serviceberry	2'-3'	.50 to .70
Aronia arbutifolia Red Chokeberry	12"-18"	.40 to .60
Clethra alnifolia Summersweet		.60 to .80
Cornus amomum Silky Dogwood		.40 to .60
Ilex glabra Inkberry		.60 to .80
Ilex verticillata Winterberry		.50 to .70
Kalmia latifolia Mountain Laurel		.50 to .70
Leucothoe catesbaei Drooping Leucothoe		.50 to .70
Lindera benzoin Spicebush		.40 to .60
Viburnum acerifolium Mapleleaf Viburnum		.40 to .60
Viburnum cassinoides Witherod		.40 to .50

(added 6/14/89)

Viburnum prunifolium (multi-stem) Black Haw	2'-3'	.40 to .60
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FOR SHADE (cont.):

HERBACEOUS PLANTS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	*Seeding <u>Rate</u>	Expected Mortality or Thinning <u>Ratio</u>
Actaea alba White Baneberry		.70 to .80
Actaea rubra Red Baneberry		.70 to .80
Anemone quinquefolia Wood Anemone		.50 to .60
Anemonella thalictroides Rue-Anemone		.50 to .60
Aquilegia canadensis Columbine	1 lb./acre	.50 to .60
Aster novae-angliae New England Aster	2 lbs./acre	.50 to .60
Claytonia virginica Spring Beauty		.60 to .70
Dryopteris marginalis Woodfern		.50 to .60
Polystichum acrostichoides Christmas Fern		.50 to .60
Pyrola elliptica Shin Leaf		.60 to .70
Sanguinaria canadensis Bloodroot		.60 to .70
Trillium grandiflorum Great Trillium		.60 to .70

(added 6/14/89)

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FOR MOIST AREAS

TREES

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning Ratio
Acer rubrum Red Maple	3'-4' Whips	.35 to .50
Crataegus crusgalli Cockspur Thorn	2'-3'	.60 to .75
Fraxinus pennsylvanica Green Ash	4'-5' Whips	.40 to .60
Larix laricina Tamarack		.50 to .70
Liquidambar styraciflua Sweet Gum	2'-3'	.60 to .75
Nyssa sylvatica Black Gum (Tupelo)	2'-3'	.70 to .80
Quercus palustris Pin Oak	18"-24"	.50 to .70
Tilia americana Basswood	4'-5' Whips	.35 to .50

(added 6/14/89)

Betula nigra River Birch	2'-3'	.40 to .60
Platanus occidentalis Sycamore	4'-5' Whips	.40 to .60
Pinus strobus White Pine		.50 to .70

FOR MOIST AREAS (cont.)

SHRUBS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning Ratio
Cephalanthus occidentalis Buttonbush		.60 to .80
Clethra alnifolia Summersweet		.60 to .80
Cornus sericea Red Osier Dogwood	12"-18"	.40 to .60
Cornus s. flaviramea Yellowtwig Dogwood		.40 to .60
Ilex glabra Inkberry		.60 to .80
Ilex verticillata Winterberry		.50 to .70
Kalmia latifolia Mountain Laurel		.50 to .70
Lindera benzoin Spicebush		.40 to .60
Myrica pennsylvanica Bayberry		.40 to .60
Sambucus canadensis Elderberry		.40 to .60
Viburnum dentatum Arrowwood		.40 to .60
Viburnum trilobum American Cranberrybush	12"-18"	.40 to .60

FOR MOIST AREAS (cont.)

(added 6/14/89)

Cornus amomum Silky Dogwood	.40 to .60
Rhododendron arborescens Sweet Azalea	.50 to .70
Rhododendron nudiflorum Pinxterbloom Azalea	.50 to .70

FOR MOIST AREAS (cont.)

HERBACEOUS PLANTS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning Ratio
Adiantum pedatum Maidenhair Fern		.50 to .60
Arisaema triphyllum Jack-In-The-Pulpit		
Asarum canadense Wild Ginger		.50 to .60
Caltha palustris Marsh marigold		
Chelone glabra Turtlehead		.50 to .60
Geranium maculatum Wild Geranium		.40 to .50
Iris versicolor Blueflag		.30 to .40
Lilium superbum Turks-cap Lily		.50 to .60
Lobelia cardinalis Cardinal Flower		.50 to .60
Osmunda cinnamomea Cinnamon Fern		.50 to .60
Smilacina racemosa False Solomon's Seal		.40 to .50
Thalictrum dioicum Meadow-Rue		.50 to .60

OPEN FIELD SITUATIONS

TREES

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning Ratio
Acer saccharum Sugar Maple	4'-5' Whips	.40 to .50
Betula lenta Sweet Birch		
Betula lutea Yellow Birch		
Crataegus phaenopyrum Washington Hawthorn	3'-4'	.50 to .70
Juglans nigra Black Walnut	12"-18"	.50 to .70
Liriodendron tulipifera Tulip Tree	3'-4'	.40 to .50
Juniperus virginiana Red Cedar	10"-16"	.50 to .70
Malus coronaria Wild Sweet Crab Apple		
Quercus alba White Oak	4"-8"	.60 to .80
Quercus borealis Red Oak	6"-12"	.50 to .70

(added 6/14/89)

Acer rubrum Red Maple	4'-5' Whips	.40 to .50
Crataegus mollis Downy Hawthorn	3'-4'	.50 to .70

OPEN FIELD SITUATIONS (cont.)

SHRUBS AND VINES

(revised 6/14/89)

Botanical Name <u>Common Name</u>	Size	Expected Mortality or Thinning <u>Ratio</u>
Parthenocissus quinquefolia Virginia Creeper		.15 to .25
Celastris scandens Bittersweet	12"-18"	.50 to .60
Cornus racemosa Gray Dogwood	10"-18"	.25 to .40
Corylus americana Hazelnut	18'-24"	.40 to .50
Potentilla fruticosa Bush Cinquefoil		.20 to .30
Viburnum cassinoides Witherod		.40 to .50
Viburnum dentatum Arrowwood	12"-18"	.30 to .40
Viburnum lentago Nannyberry	12"-18"	
Viburnum prunifolium (mulit-stem) Black Haw	12"-18"	.40 to .60

OPEN FIELD SITUATIONS (cont.)

HERBACEOUS PLANTS

(revised 6/14/89)

Botanical Name <u>Common Name</u>	*Seeding <u>Rate</u>	Expected Mortality or Thinning <u>Ratio</u>
Aster novae-angliae New England Aster.	2 lbs./acre	.50 to .60
Chrysanthemum leucanthemum Ox-Eye Daisy	5 lbs./acre	
Dennstedtia punctilobula Hayscented Fern		.50 to .60
Liatris spicata Blazing Star	12 lbs./acre	.50 to .60
Lilium philadelphicum Wood Lily		.50 to .60
Rudbeckia hirta Black-Eyed Susan	2 lbs./acre	
Saponaria officinalis Bouncing Bet	3 lbs./acre	.50 to .60

(added 6/14/89).

Asclepias tuberosa Butterfly-Weed	12 lbs./acre
Coreopsis lanceolata Lance-Leaved Coreopsis	10 lbs./acre

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