EXECUTIVE SUMMARY

EVALUATION OF POTENTIAL LANDFILL SITES

The Oregon Department of Environmental Quality (DEQ) is faced with the challenge of siting a landfill for the Portland metropolitan area as part of its comprehensive solid waste management program. This executive summary addresses one stage in that landfill siting process: the evaluation of approximately 140 potential landfill site areas for suitability as potential landfill sites. The summary describes the process used to evaluate the potential sites and the rationale for recommending the top 12 to 18 sites for further study. The recommended top sites are presented and the next phase of the landfill siting project is described.

Background

The 1985 Legislature, through passage of Senate Bill 662, gave the DEQ and the Environmental Quality Commission (EQC) the responsibility and authority to site a solid waste disposal facility to serve the Portland metropolitan area. The siting of a sanitary landfill is only one part of that legislation, which also requires the development and implementation of a comprehensive waste reduction program for the Portland region. The timely siting of a landfill is seen as critical, because St. John's Landfill, the Portland area's existing general-purpose landfill, is expected to be full by 1989.

In response to Senate Bill 662, the DEQ has begun a process that will lead to the selection by the EQC of an environmentally acceptable landfill site. The time frame for the site selection process calls for the development of a comprehensive list of potential sites by May 1986; the completion and submission to the EQC of a study identifying 12 to 18 preferred and appropriate sites in June 1986; and the selection by the DEQ of three finalist sites by November 1, 1986. Each finalist site will receive a detailed feasibility analysis. This work will culminate in the issuance by the EQC of an order to establish a site or sites by July 1, 1987, as required by Senate Bill 662.

The DEQ realizes that any site will have some environmental or technical shortcomings, but has designed its site selection process to identify those sites that are most suitable for development as a municipal sanitary landfill. To ensure that a suitable site is selected, the DEQ, with a team of consultants, has developed a comprehensive set of landfill siting criteria, which has been reviewed through a number of expert peer review sessions and public meetings and hearings. These criteria are described in detail in the report entitled "Portland Metropolitan Area Landfill Siting Criteria," dated April 1986. Three categories of criteria are included: pass/fail criteria, site evaluation criteria, and final decision criteria.

The purpose of the pass/fail criteria is to eliminate areas that are obviously incompatible with landfill development. The site evaluation criteria will be used to evaluate and rank all of the potential sites, and ultimately to identify the three finalist sites. The final decision criteria will be used to evaluate the three finalist sites.

Potential Landfill Site Identification Process

The study area for the initial stages of the site identification process included all of the area within Washington, Multnomah, and Clackamas Countys, where Senate Bill 662 grants the EQC broad-ranged siting authority. Specific sites within Columbia, Marion, or Yamhill Countys were retained for evaluation only if they had received prior land-use approval and had been recommended by the Board of Commissioners of that county. Because of the large land area involved, identification of potential landfill site areas began with a process, based on the DEQ's siting criteria, of systematically screening out areas unfavorable for landfill location. This screening allowed the project team to focus on the remaining potentially suitable areas. Identification of potential sites involved a three-step process. First, pass/fail criteria were mapped. Those areas which failed any single pass/fail criterion were eliminated from further consideration. Next, the worst characteristics described under the site evaluation criteria (those characteristics with a rating of 1) were mapped. Those areas where the worst characteristics of a number of criteria overlapped were identified and screened out. Finally, after the mapping process was complete, potential sites were identified by using computer-generated map overlays showing excluded and remaining areas on U.S. Geologic Survey maps.

The project team did not limit the maximum size of the sites. For example, if no obvious segregating or distinguishing features existed in an area, based on established criteria, the entire area was considered a site regardless of size. In addition, if two or more potential sites adjoined one another and had very similar characteristics, they were considered one site area. The purpose of this procedure was to carry the largest area possible through the evaluation process. With this method, a very large site area may later be split into more than one site. The ideal location for siting a landfill within the area will be established later through field review of the entire area.

There has been a strong emphasis on the integration of public input throughout the process. The public was asked to forward its suggestions for landfill sites within the study area. Suggested sites not lying in excluded zones were entered for subsequent application of evaluation criteria. In addition to the sites identified by the public, sites proposed by cities or counties were also placed in the evaluation system. The result of the study area mapping process and the solicitation of suggested sites was a list of approximately 140 potential landfill site areas. These sites are described in the May 1986 technical memorandum entitled "Identification of Potential Landfill Sites".

Evaluation of Potential Landfill Site Areas

The next step in the site selection process was to compare the large number of potential landfill site areas by using the site evaluation criteria. Each site area was given a numerical rating which reflects the site's relative suitability for a landfill with respect to that criterion. In assigning the ratings, the project team members relied on published reports and maps, file data, and aerial and satellite photographs. Aerial videotaping was also used where needed to confirm recorded site data and collect additional data not available from existing records.

In determining site ratings, team members were careful to make distinguishing ratings between sites only when justified by the criterion of concern and available source data on the site. For most criteria, information was available to make clear distinguishing ratings. A few criteria cannot be fully evaluated until on-site investigations are made in the next phase of the project. For many criteria, team members were able to make even more refined ratings to distinguish between sites than outlined in the April 1986 landfill site criteria report.

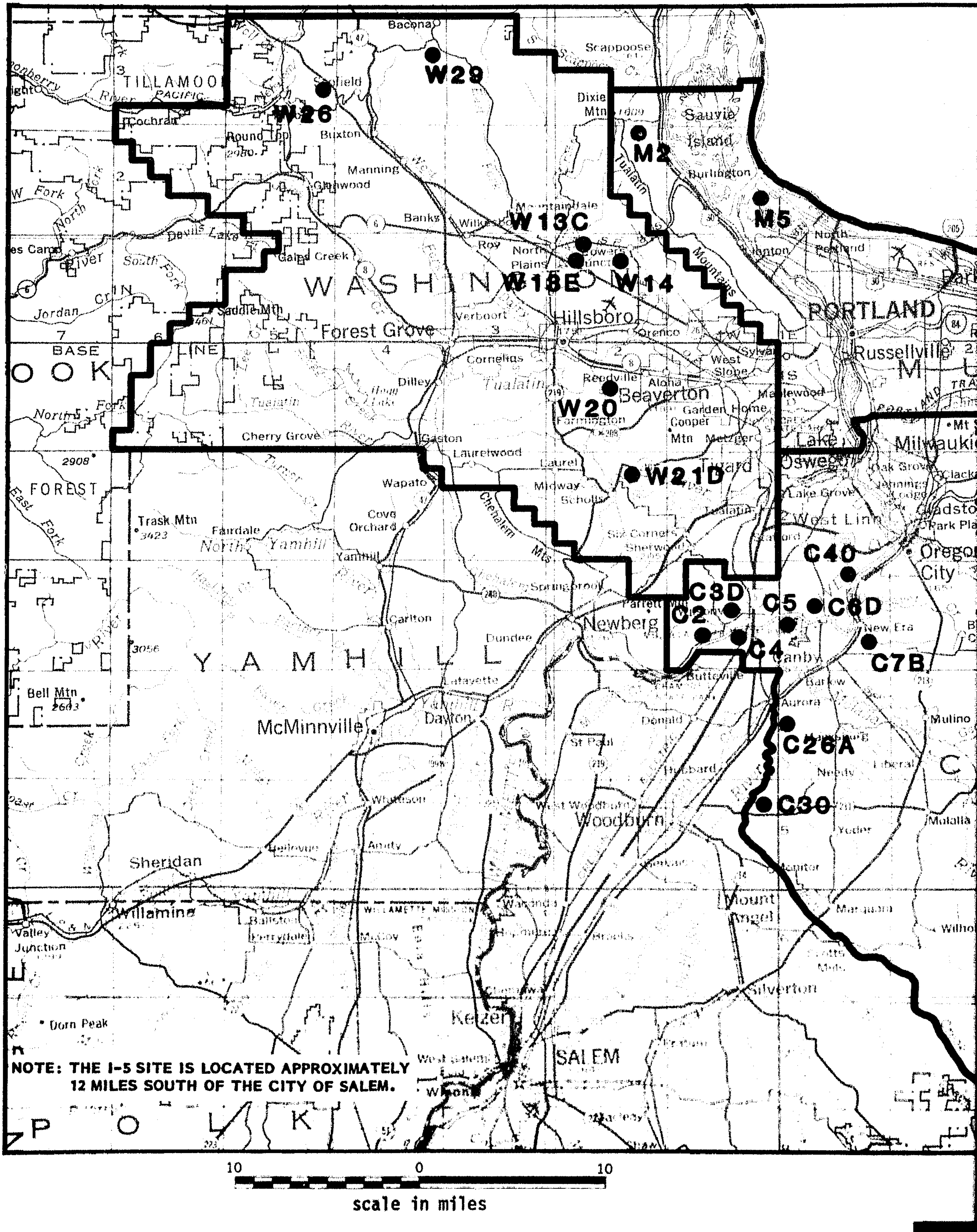
After criteria ratings were completed for the site areas, the total site scores were tabulated and compared. The total score for each site area was calculated by multiplying the rating for each criterion by its respective criterion weight and then adding these products for all criteria.

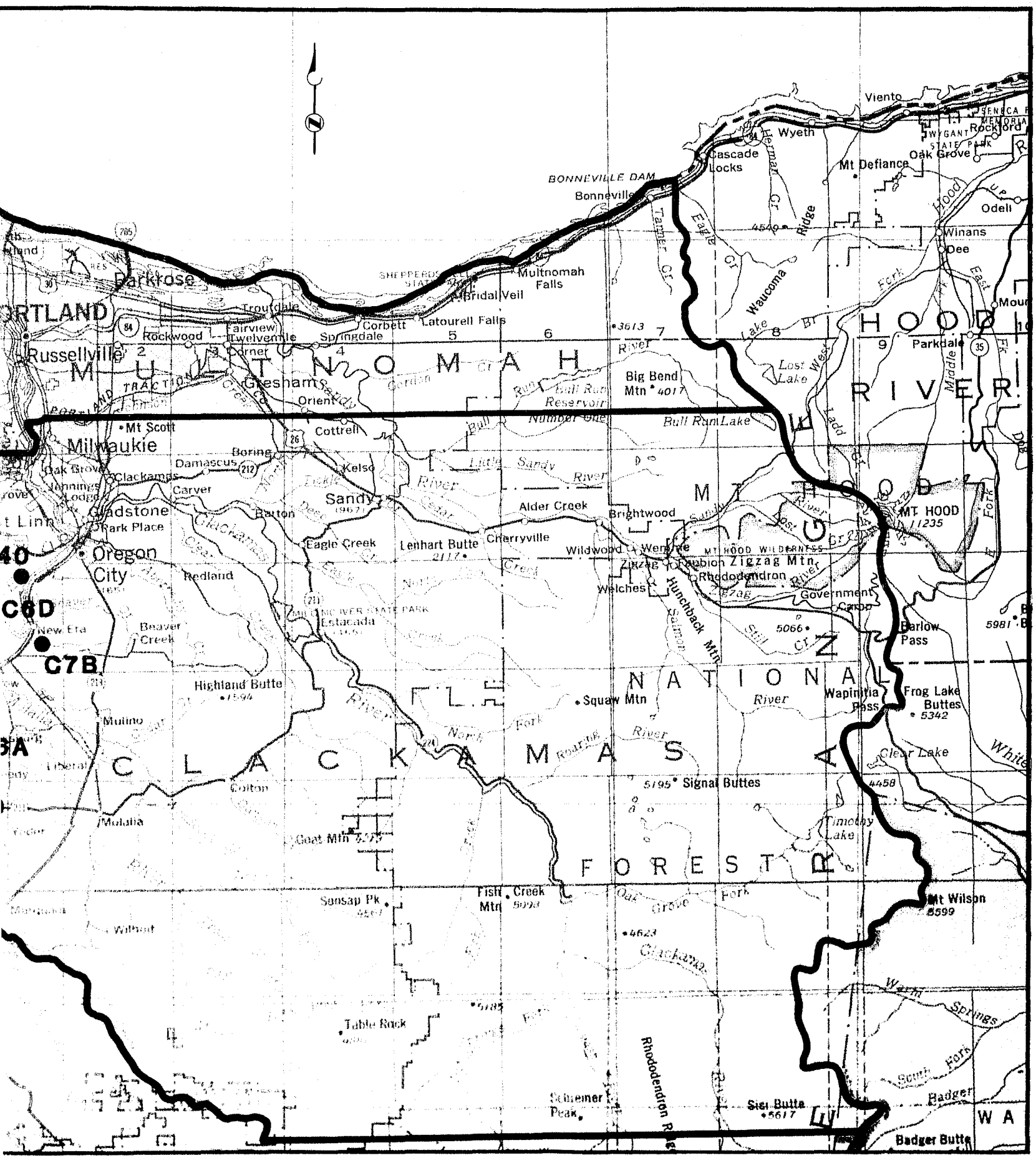
Based on the evaluation of the approximately 140 potential sites, the 19 top-scoring sites are recommended for further study including on-site investigations. Although 12 to 18 was considered the most practicable number of sites for this level of study, the nineteenth site had the same evaluation score as the eighteenth and was therefore included. There was no large gap in site scores that indicated a clear group of 12 to 18 sites. It is therefore desirable to evaluate as many sites as practicable. A map locating the 19 recommended sites and individual maps of the sites are attached to this summary.

Next Phase of the Project

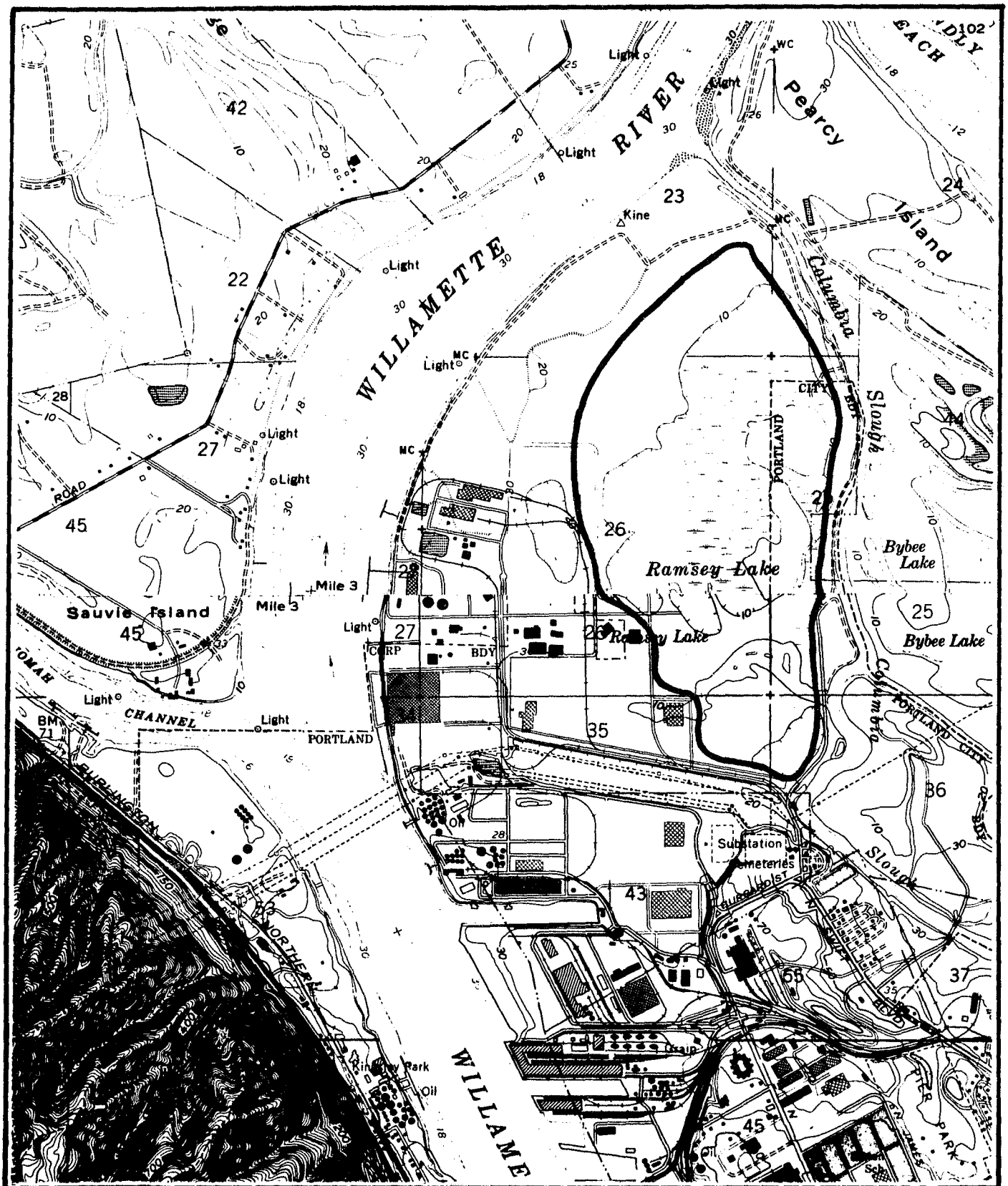
The next phase of the project includes performing more detailed study and on-site field investigations on each of the 19 recommended sites. Based on new information generated during these investigations and through the public review process, these sites will be re-rated using the site evaluation criteria. The top three sites will then be recommended for detailed landfill feasibility analysis. The top three sites will be selected by DEQ before November 1, 1986.

For more information on the DEQ landfill siting process, please contact Ms. Ann Werner, Community Involvement Coordinator, at (503) 229-5577 or, toll-free within Oregon, 1-800-452-4011.


W29
W26
M2
M5
W13C
W13E
W14
W20
W21D
C3D
C2
C5
C6D
C4
C40
C7B
C26A
C30
TILLAMOOK
WASHINGTON
YAMHILL
POLK
PORTLAND
Hillsboro
Beaverton
Forest Grove
Newberg
McMinnville
Woodburn
SALEM
Oregon City
Canby
NOTE: THE I-5 SITE IS LOCATED APPROXIMATELY 12 MILES SOUTH OF THE CITY OF SALEM.
10
0
10
scale in miles



Locations of Recommended Potential Sites - Three County Study Area



U.S.G.S. QUADRANGLE MAP SOURCE:

SAUVIE ISLAND

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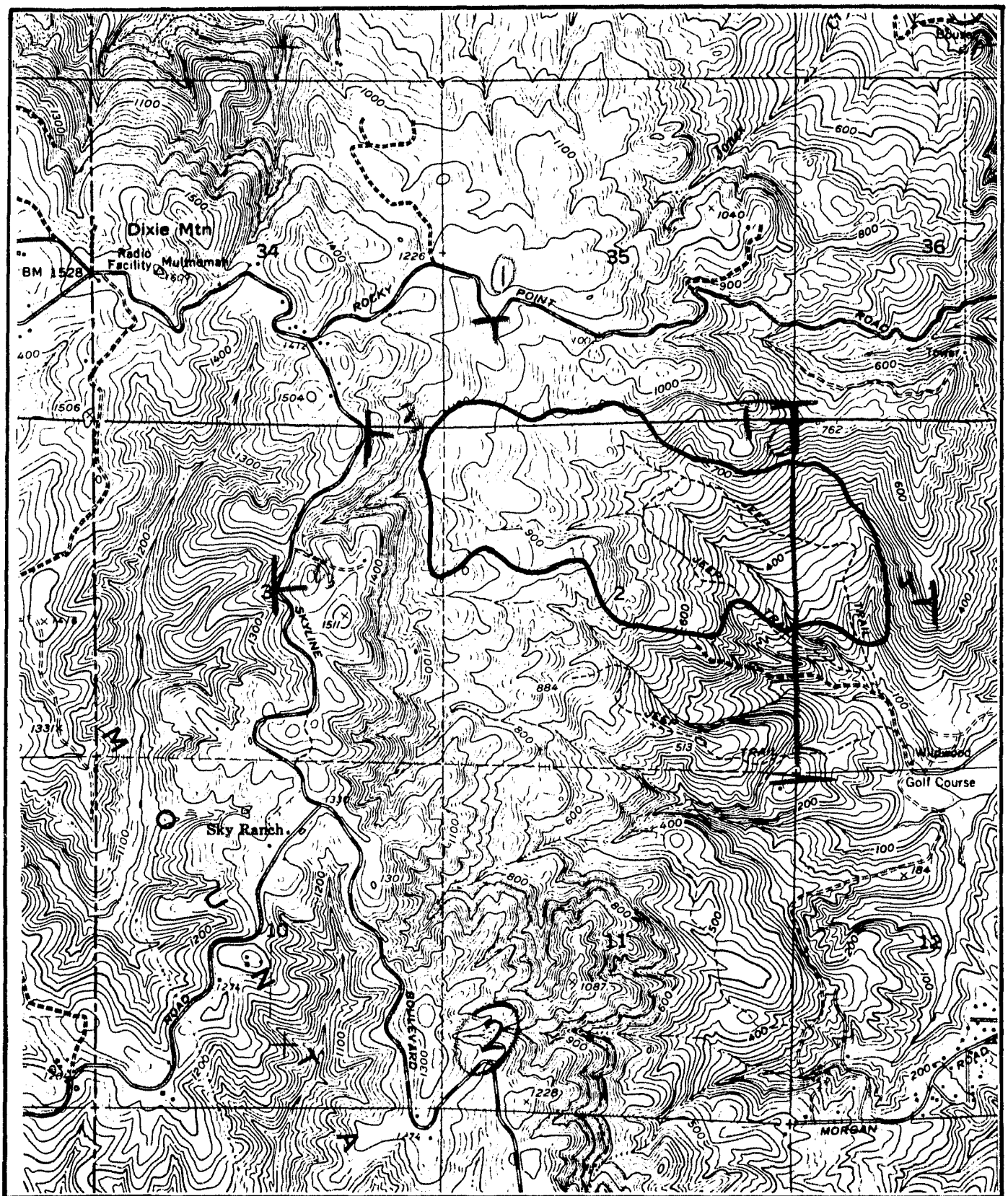
SITE BOUNDARY MAP

SITE NO.

M5

JUNE 1986



U.S.G.S. QUADRANGLE MAP SOURCE:

DIXIE MOUNTAIN

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SITE BOUNDARY MAP

SITE NO.

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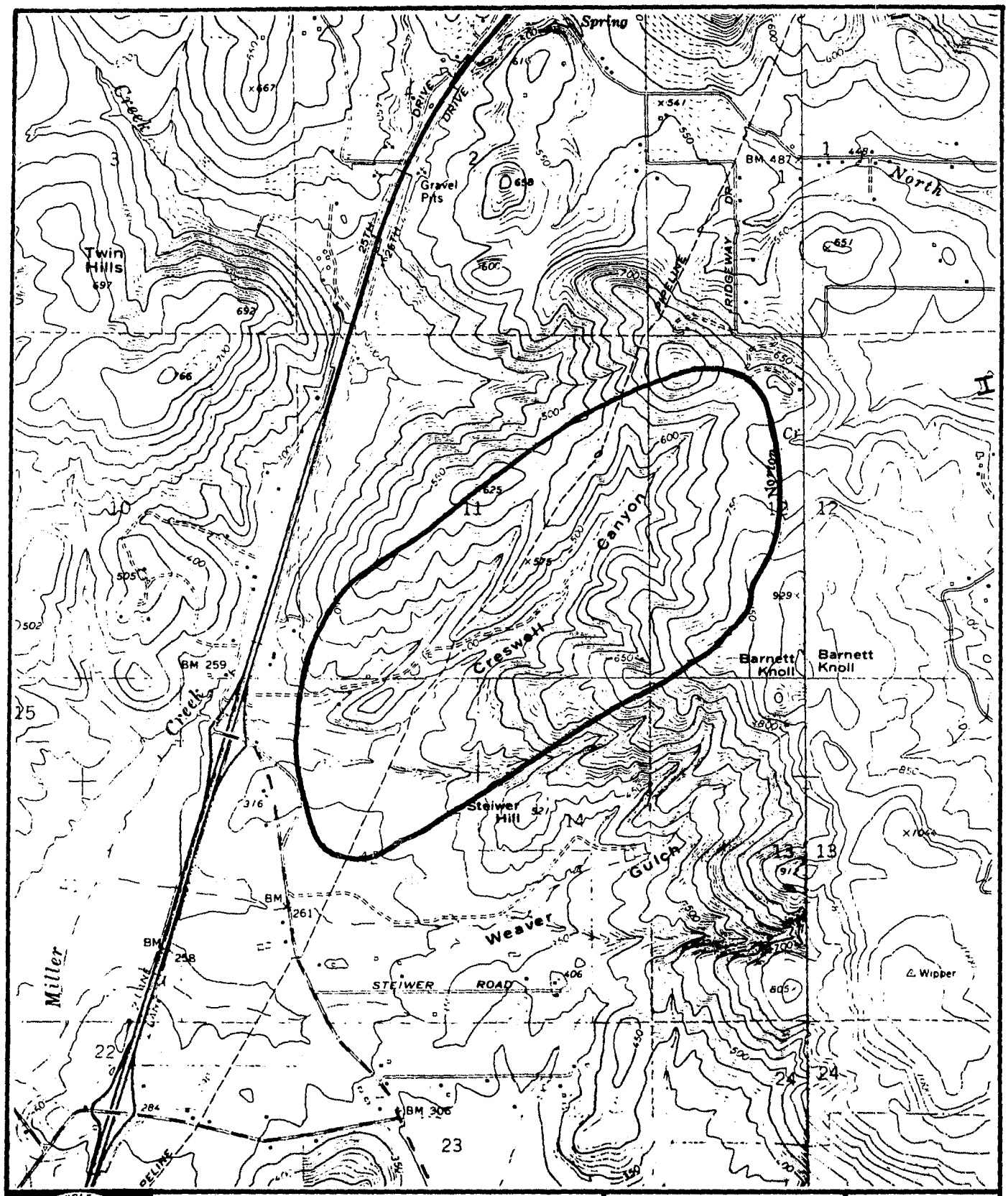


U.S.G.S. QUADRANGLE MAP SOURCE:

SIDNEY

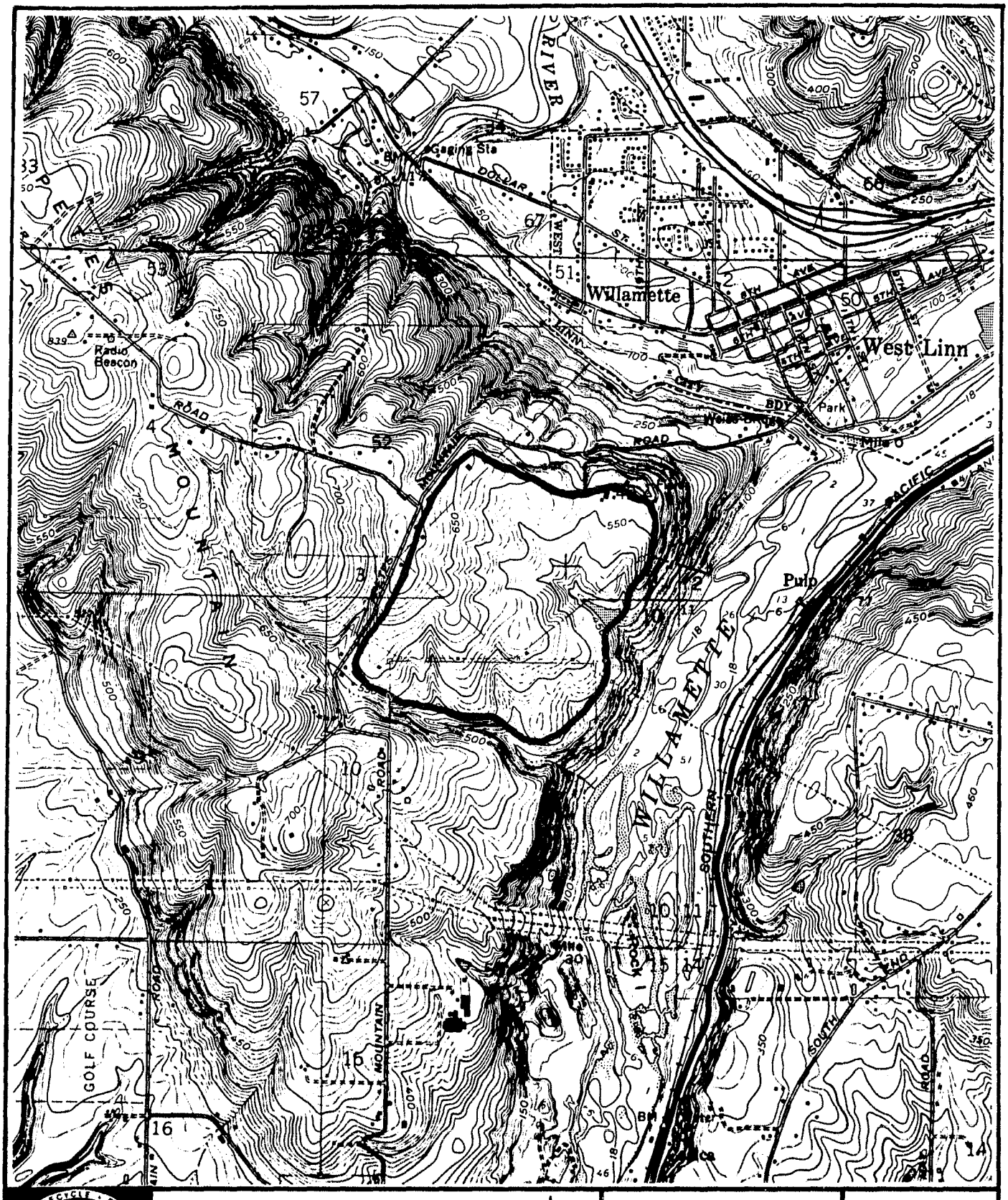
SCALE: 1:24,000

SITE BOUNDARY MAP

SITE NO.

I-5

JUNE 1986



U.S.G.S. QUADRANGLE MAP SOURCE:

CANBY

SCALE: 1:24,000

SITE BOUNDARY MAP

SITE NO.

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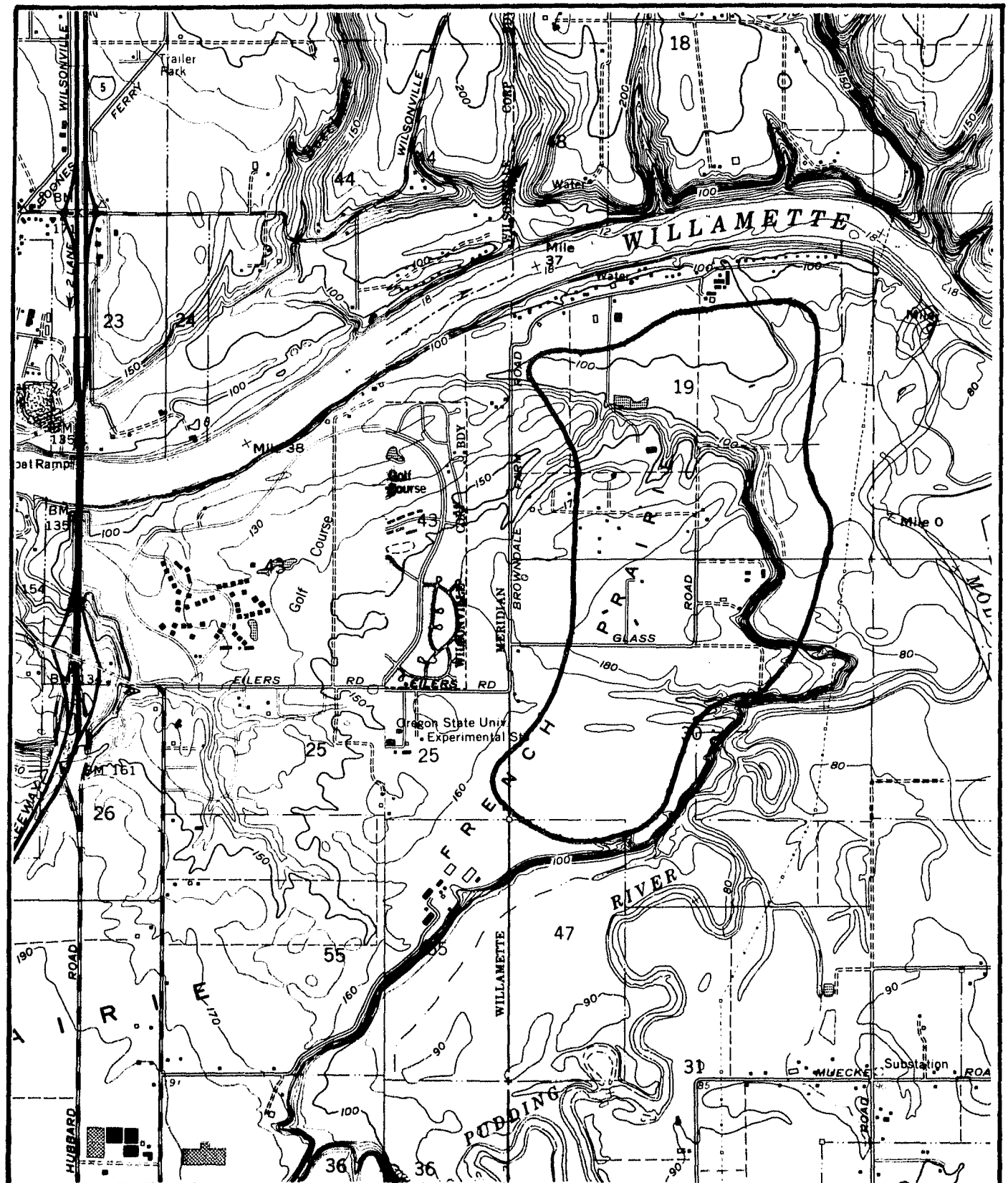

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SITE BOUNDARY MAP

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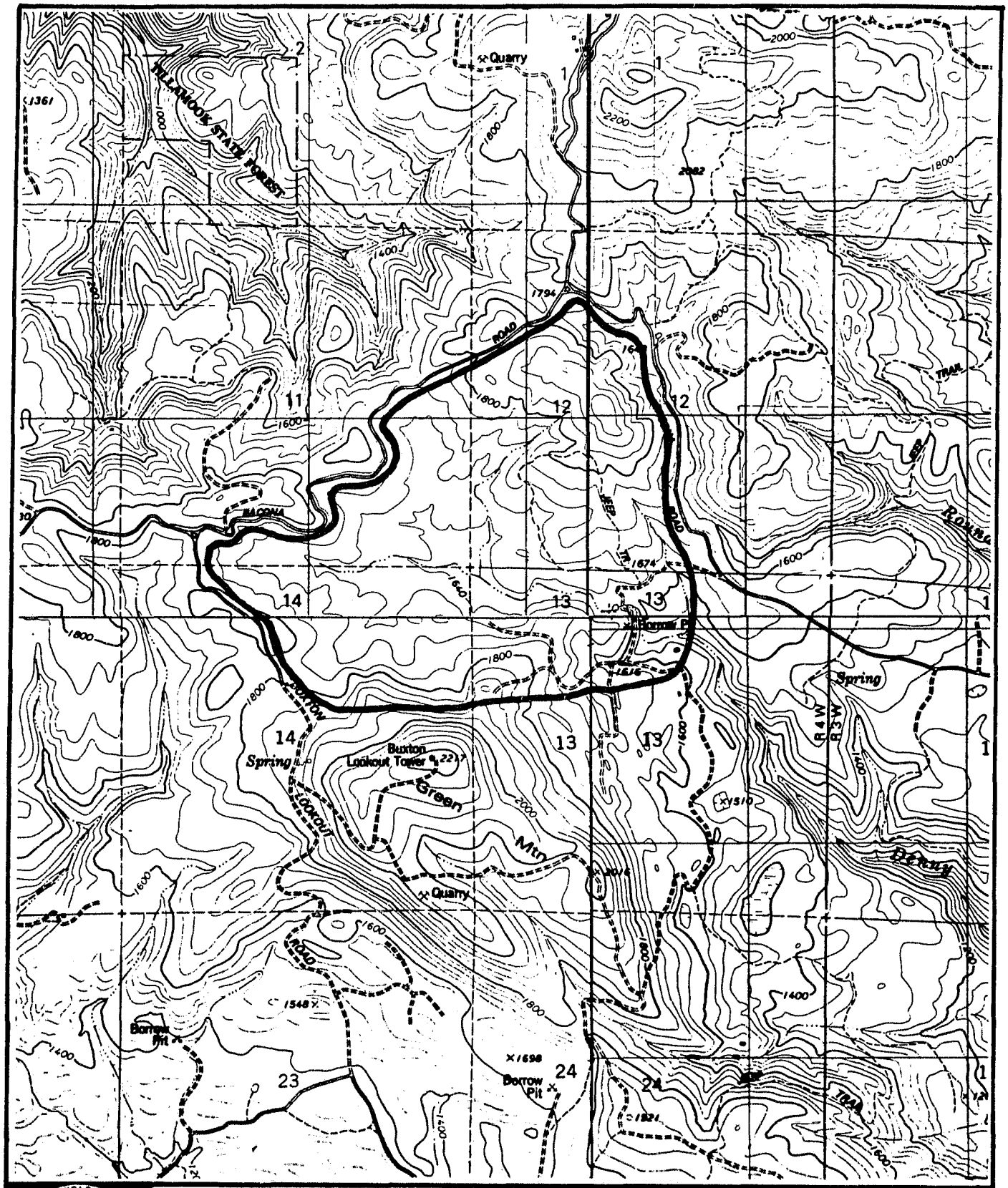

U.S.G.S. QUADRANGLE MAP SOURCE:

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SITE BOUNDARY MAP

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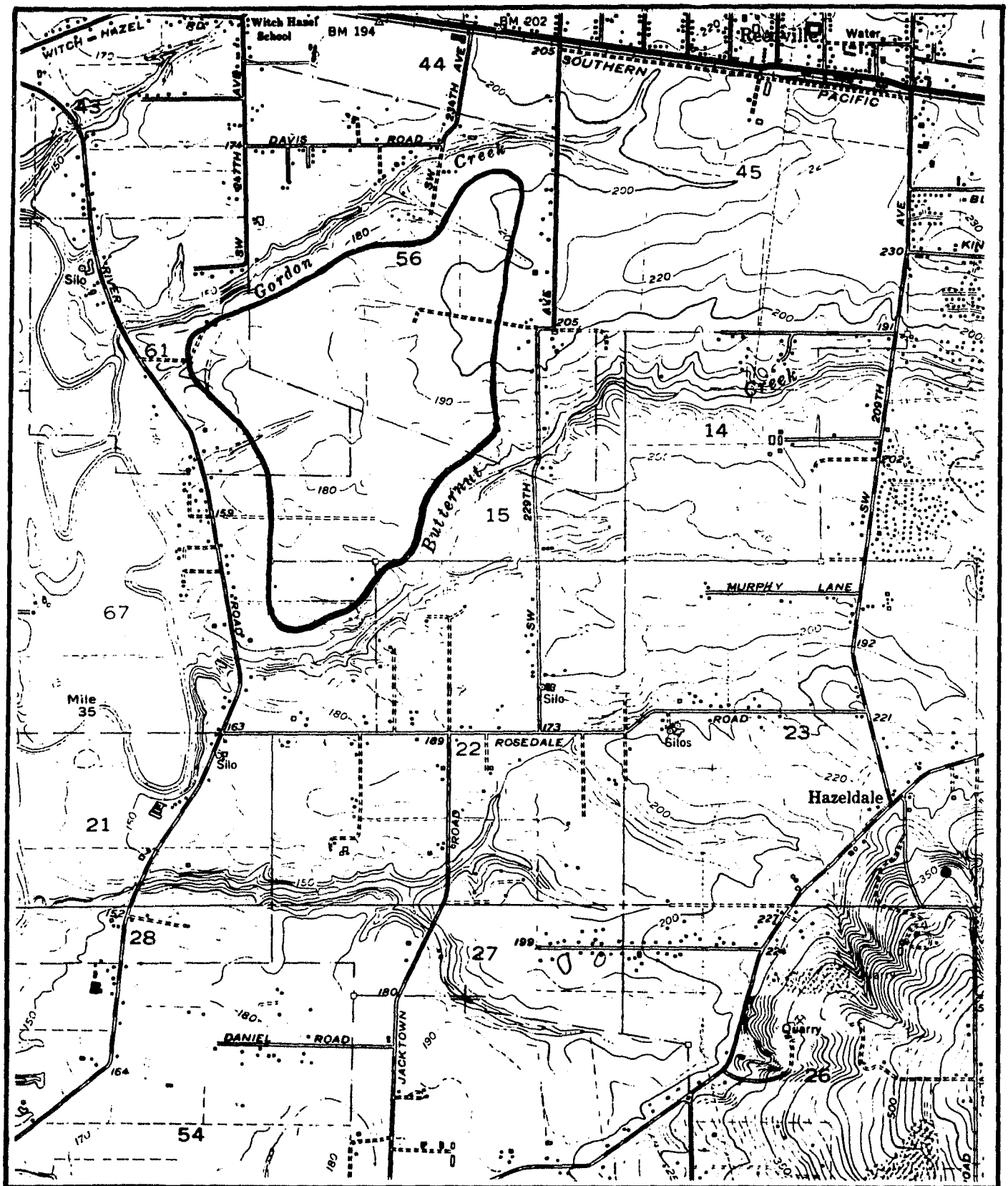

U.S.G.S. QUADRANGLE MAP SOURCE:

SCHOLLS

SCALE: 1:24,000

SITE BOUNDARY MAP

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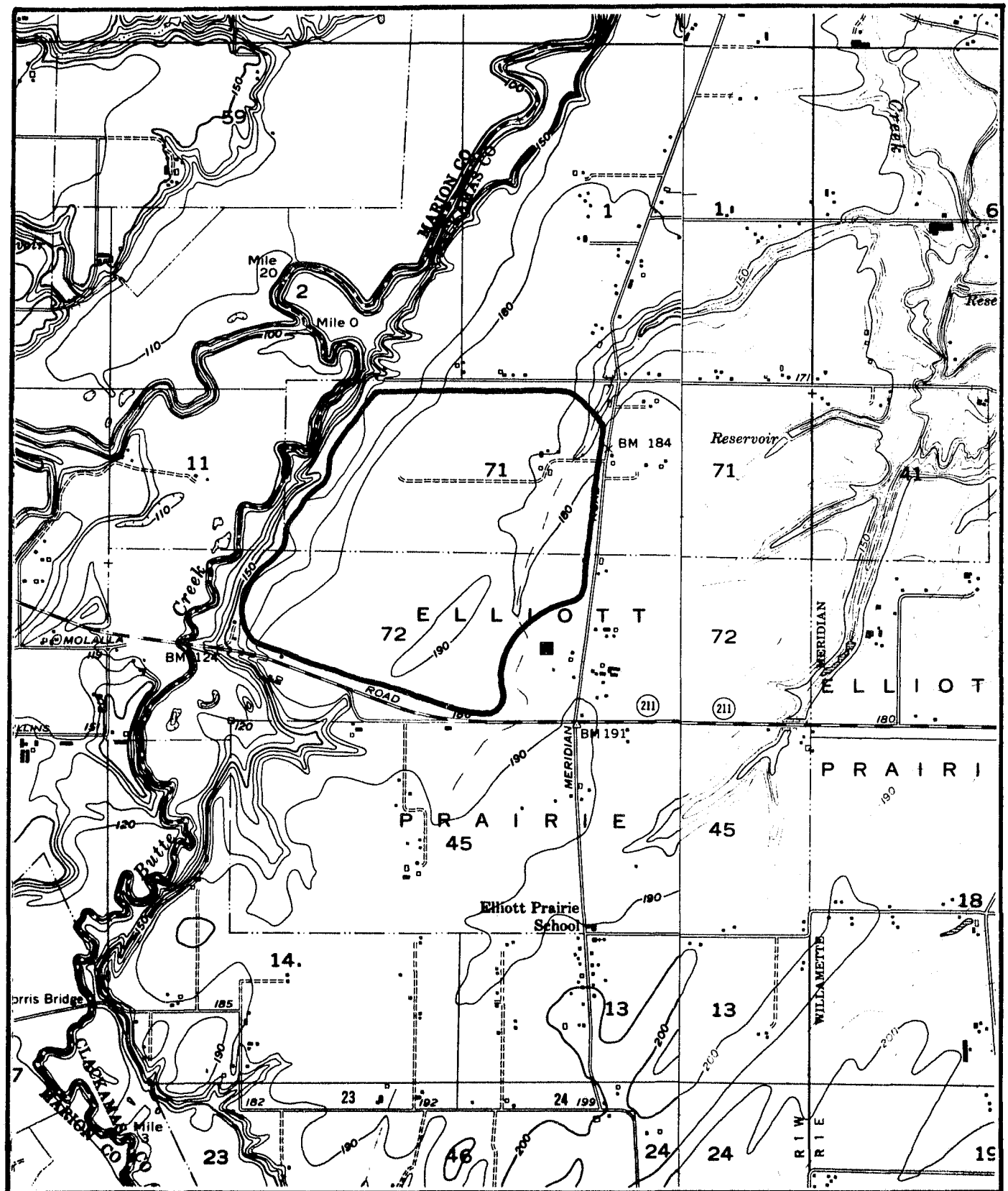

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WOODBURN

SCALE: 1:24,000

SITE BOUNDARY MAP

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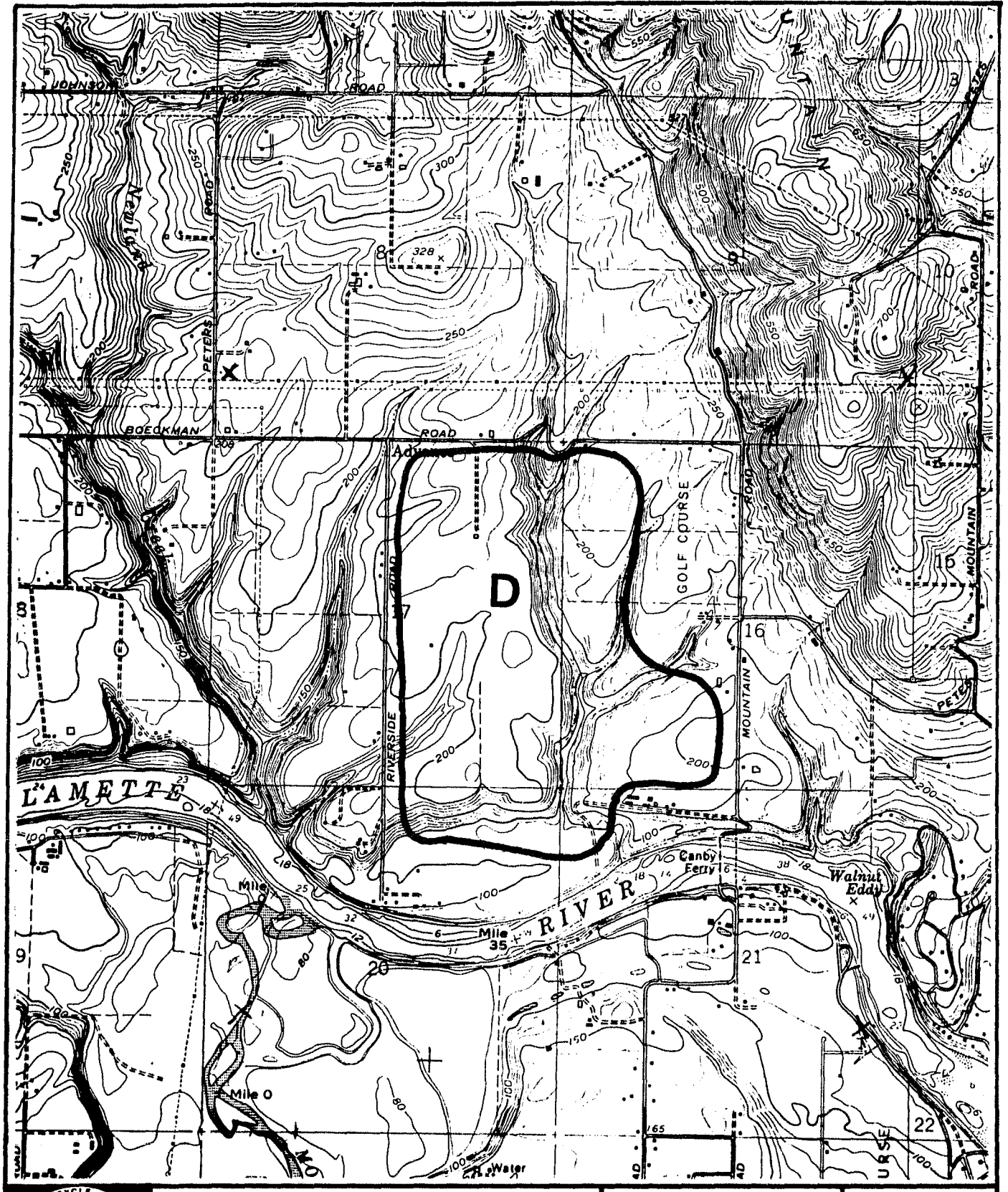

U.S.G.S. QUADRANGLE MAP SOURCE:

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SITE BOUNDARY MAP

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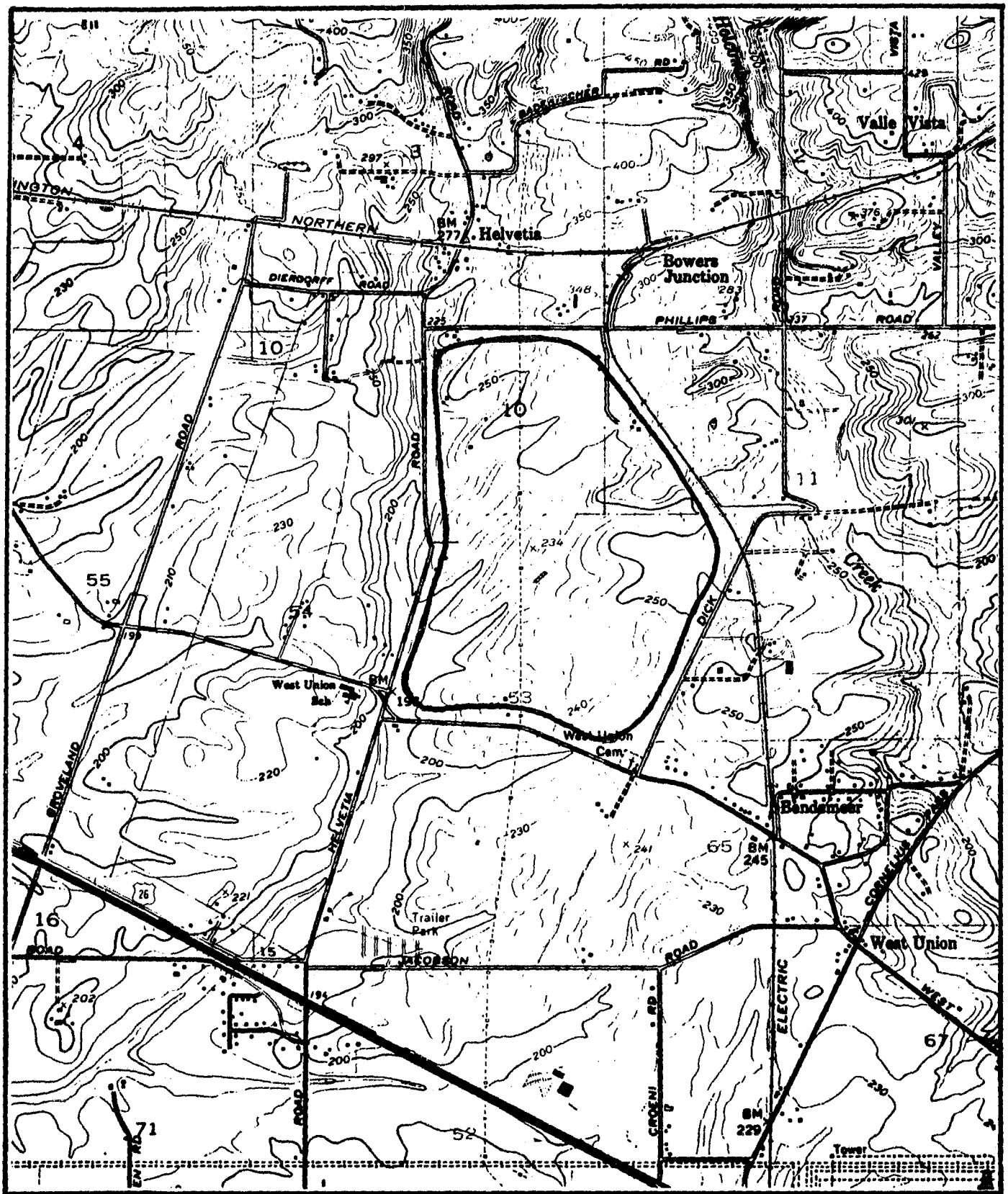

U.S.G.S. QUADRANGLE MAP SOURCE:

HILLSBORO

SCALE: 1:24,000

SITE BOUNDARY MAP

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W14

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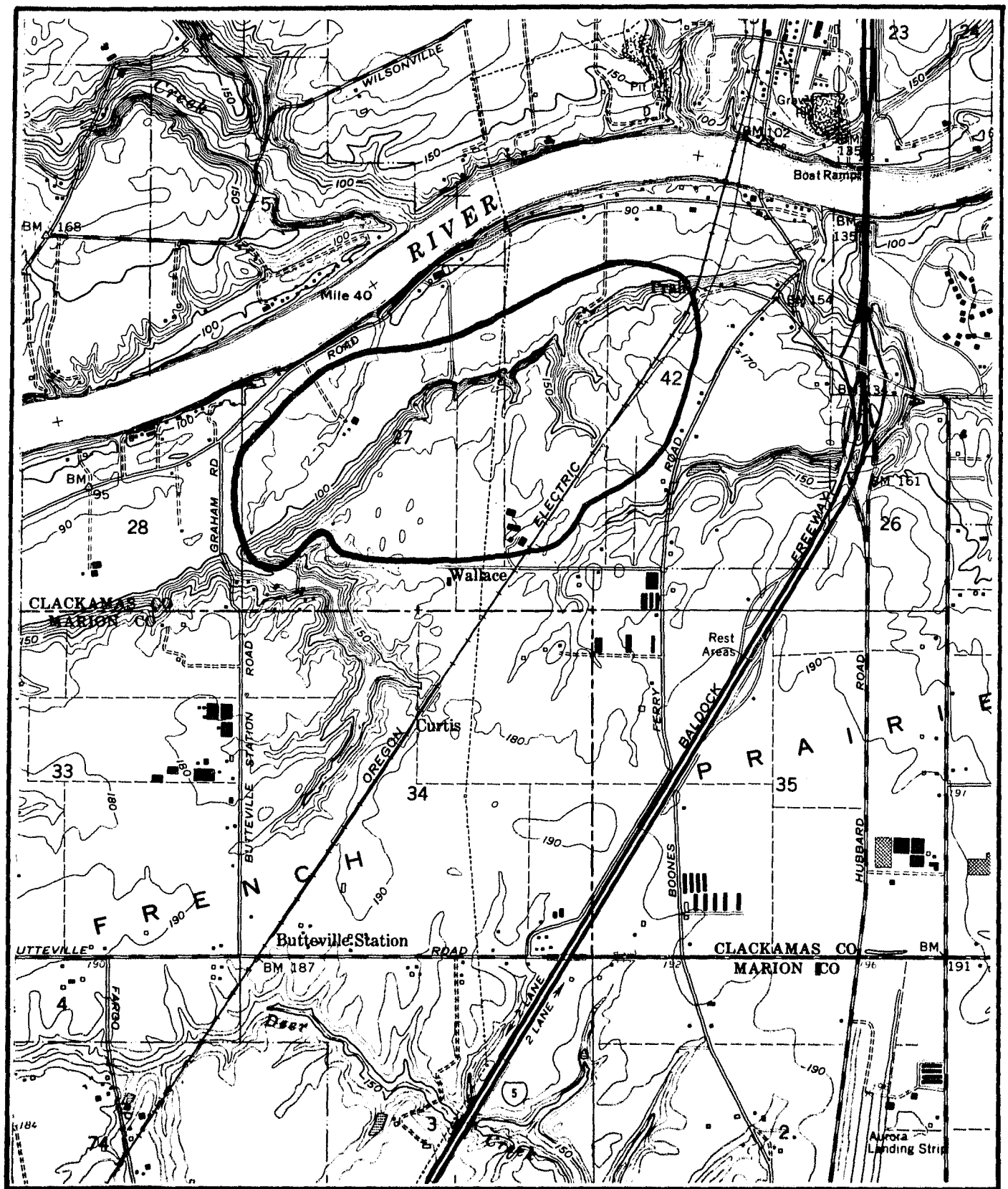

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SITE BOUNDARY MAP

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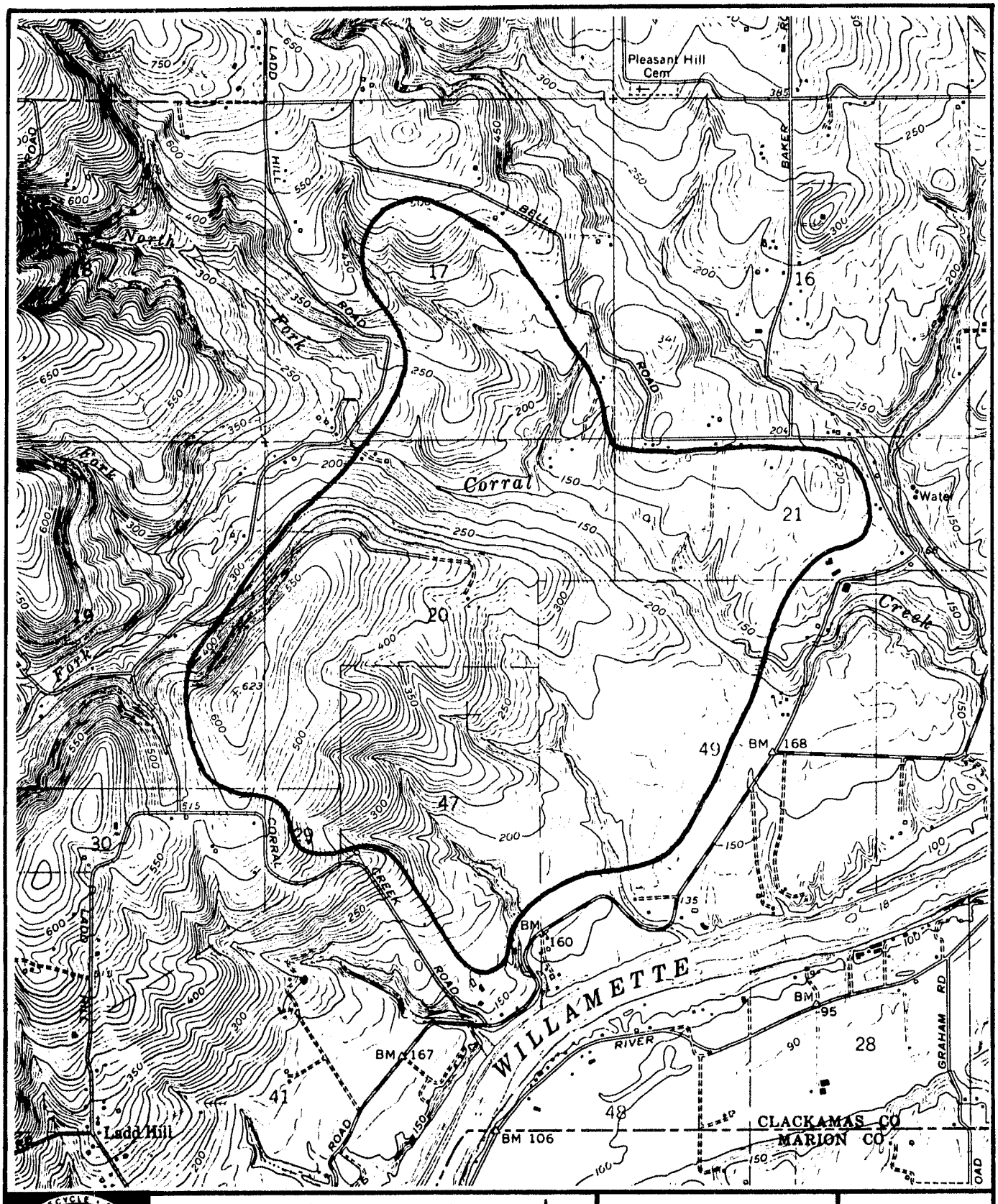

U.S.G.S. QUADRANGLE MAP SOURCE:

SHERWOOD

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SITE BOUNDARY MAP

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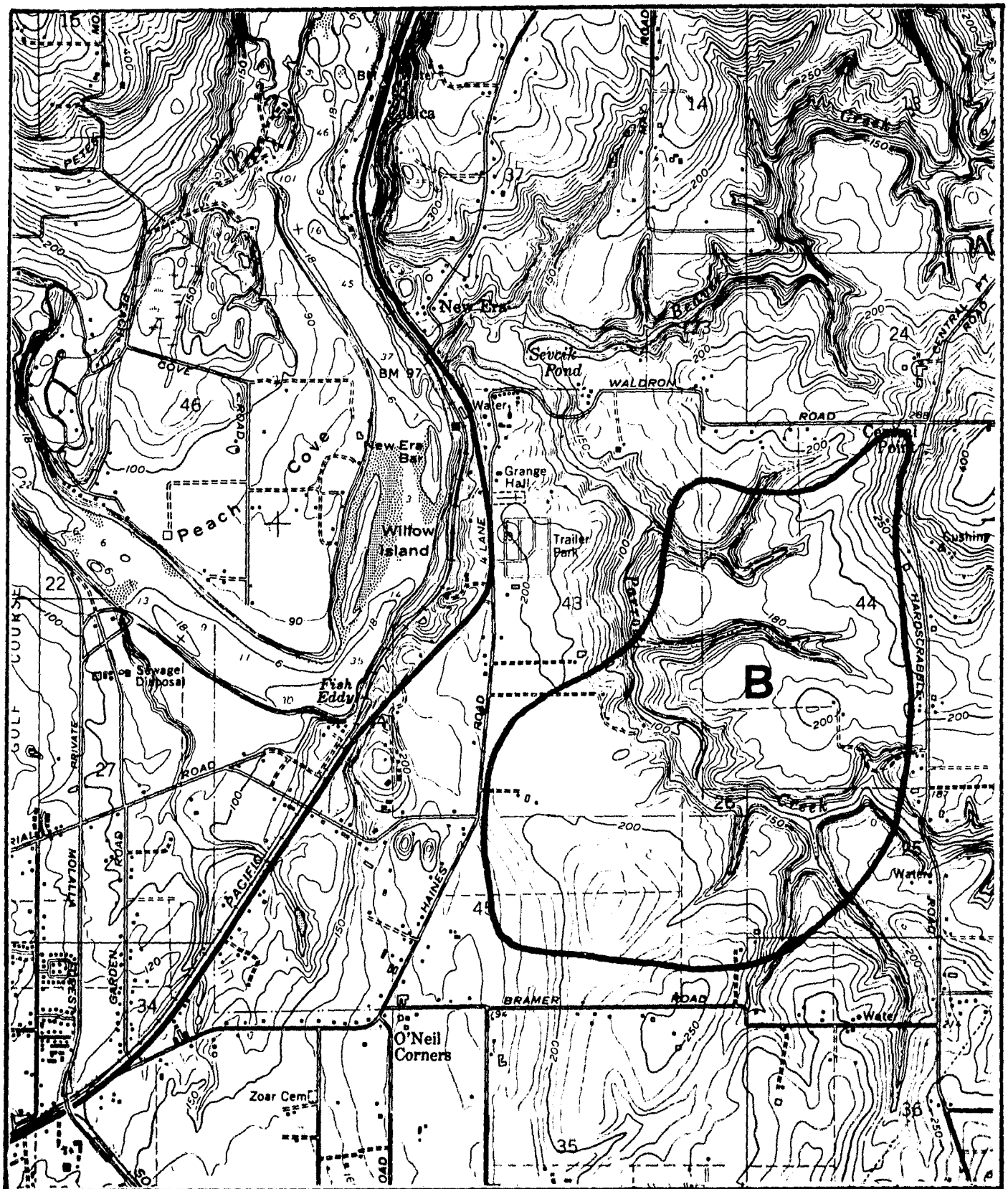

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SITE BOUNDARY MAP

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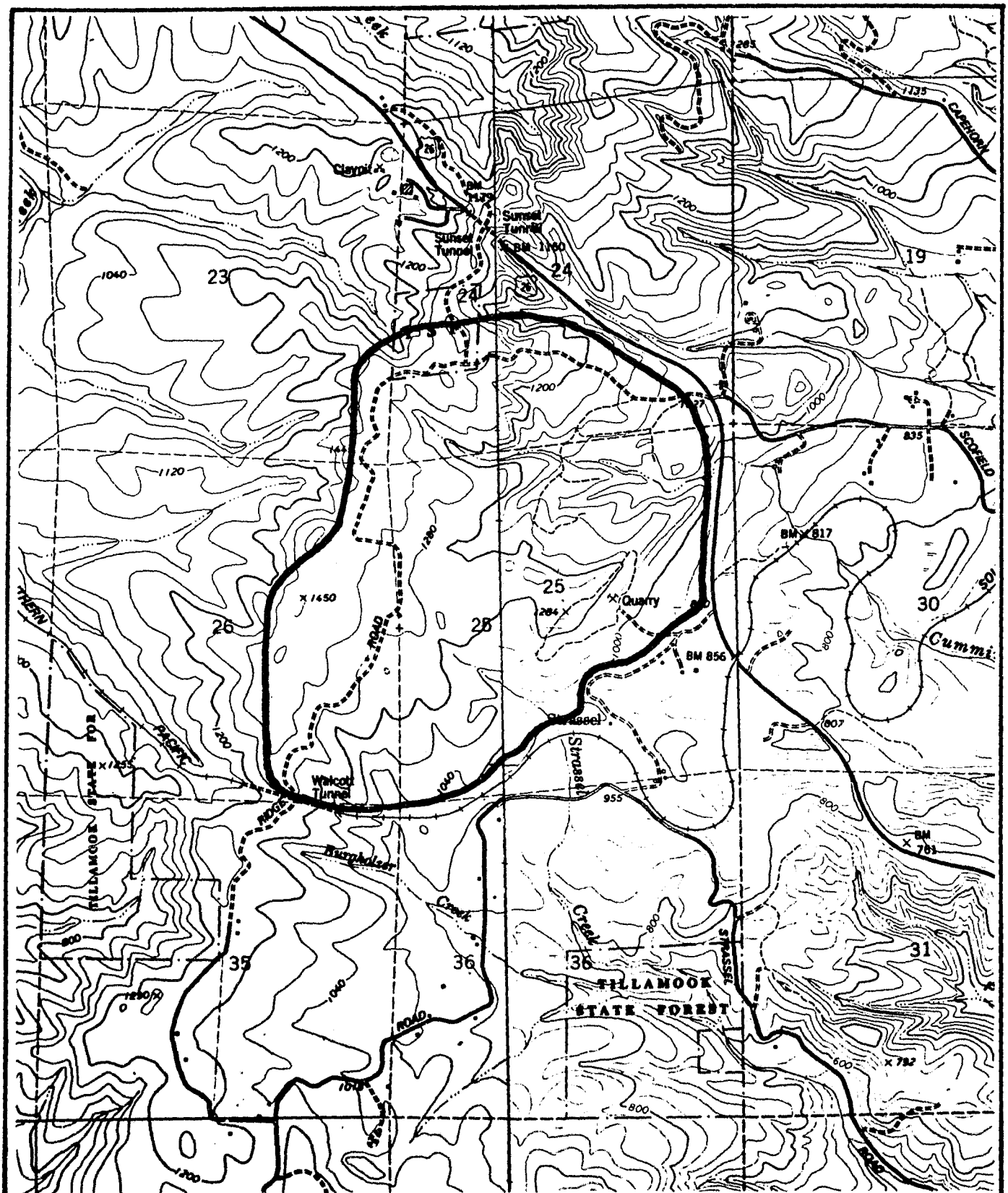

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SITE BOUNDARY MAP

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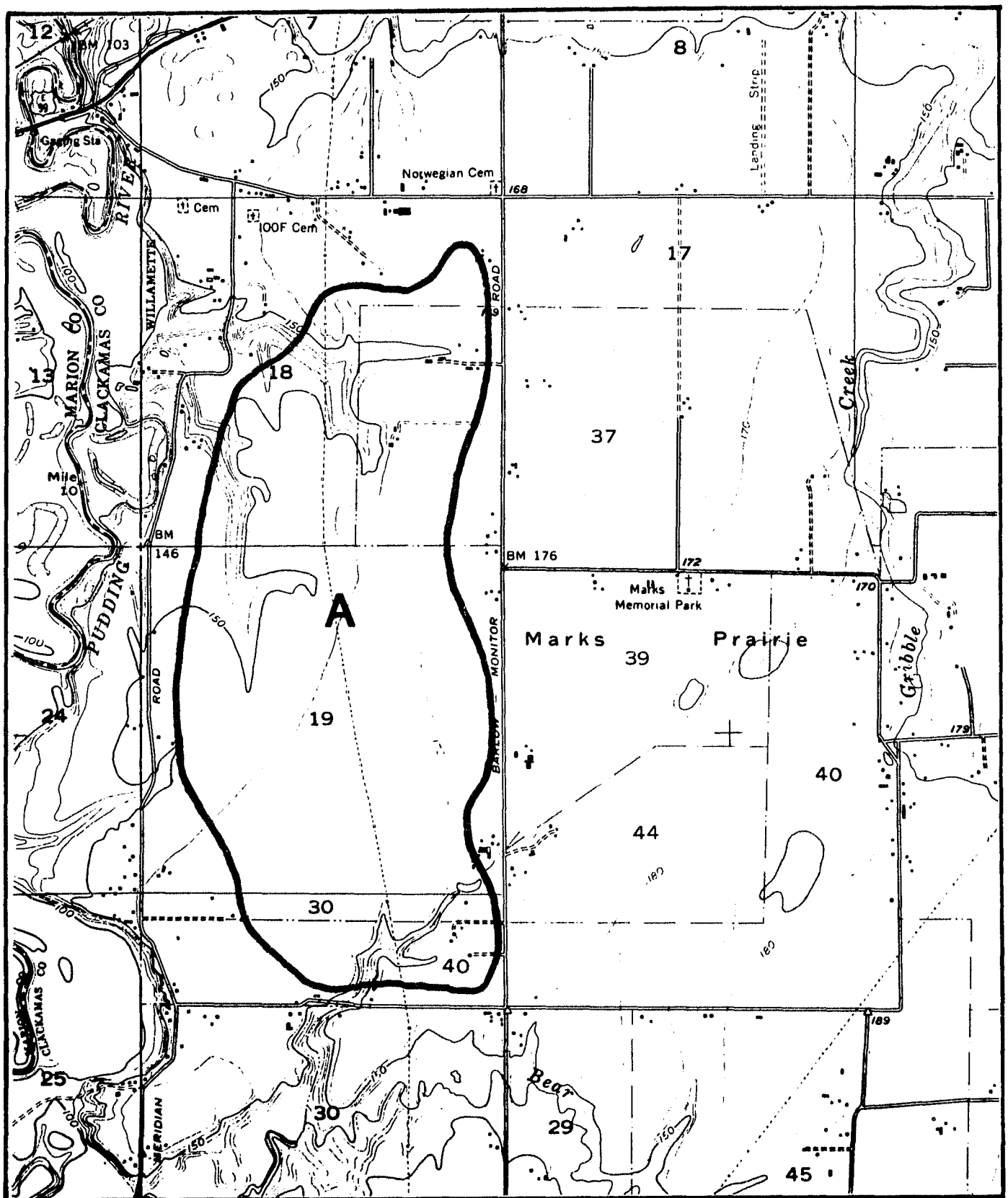

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SITE BOUNDARY MAP

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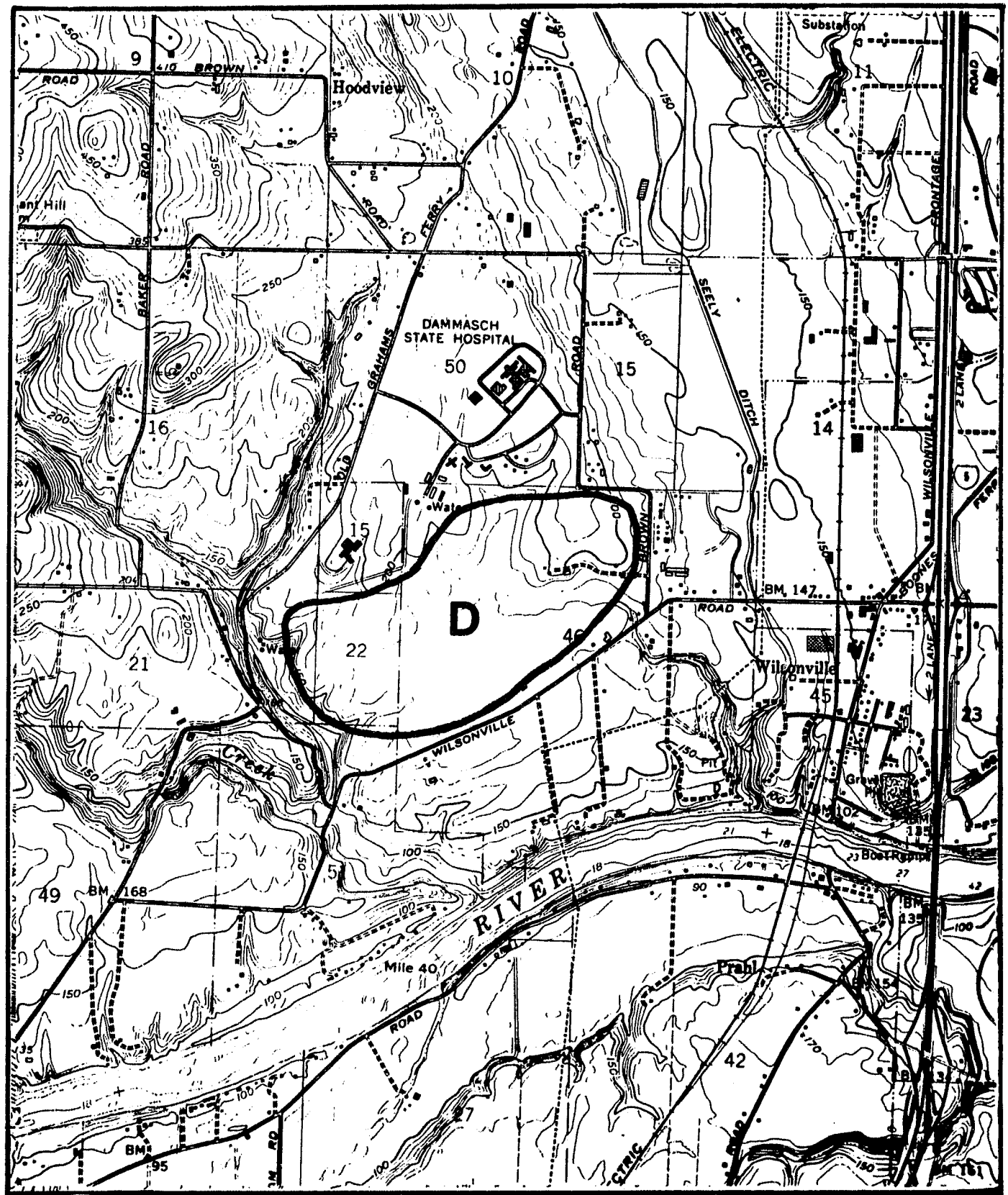

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SITE BOUNDARY MAP

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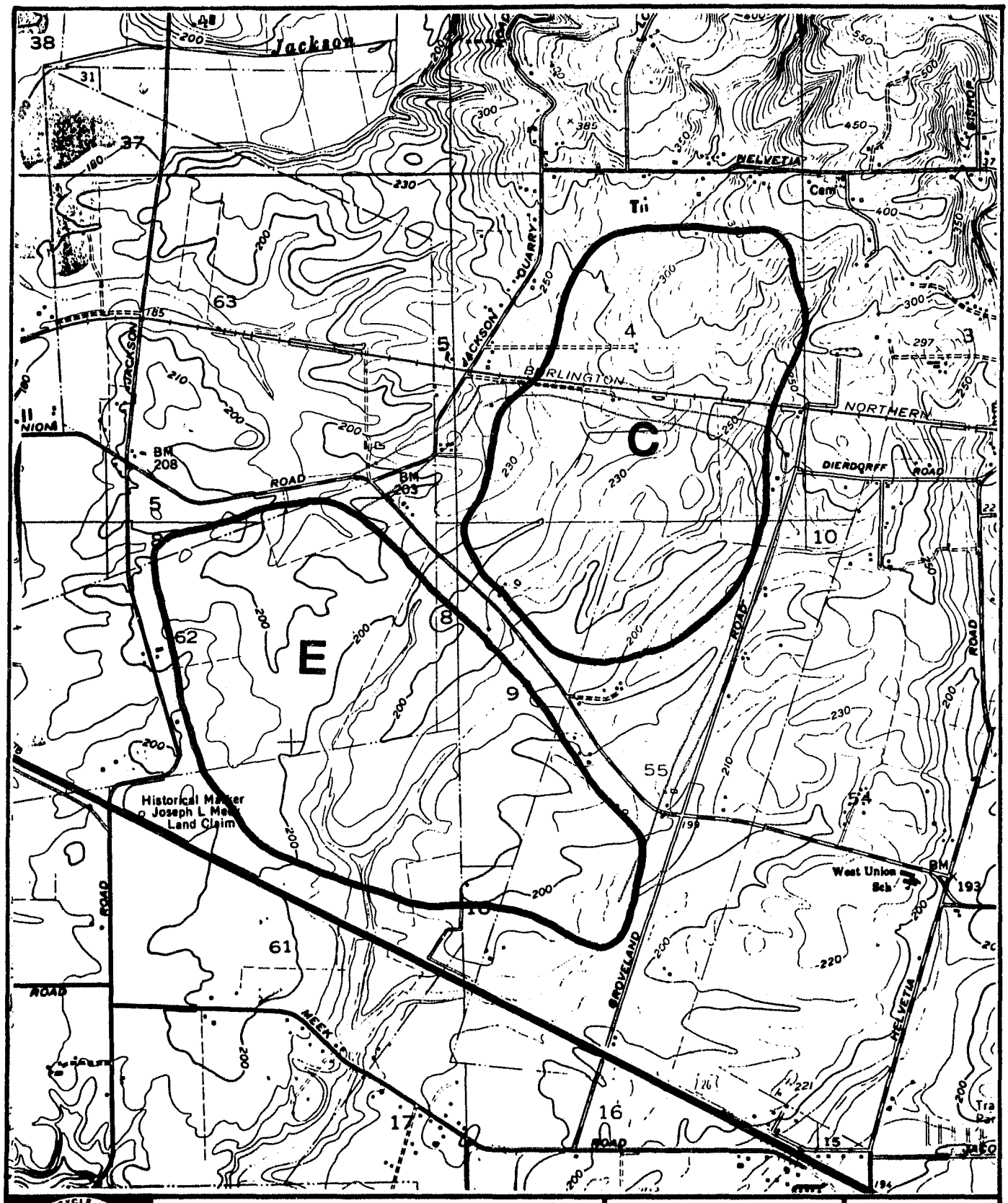

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HILLSBORO

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SITE BOUNDARY MAP

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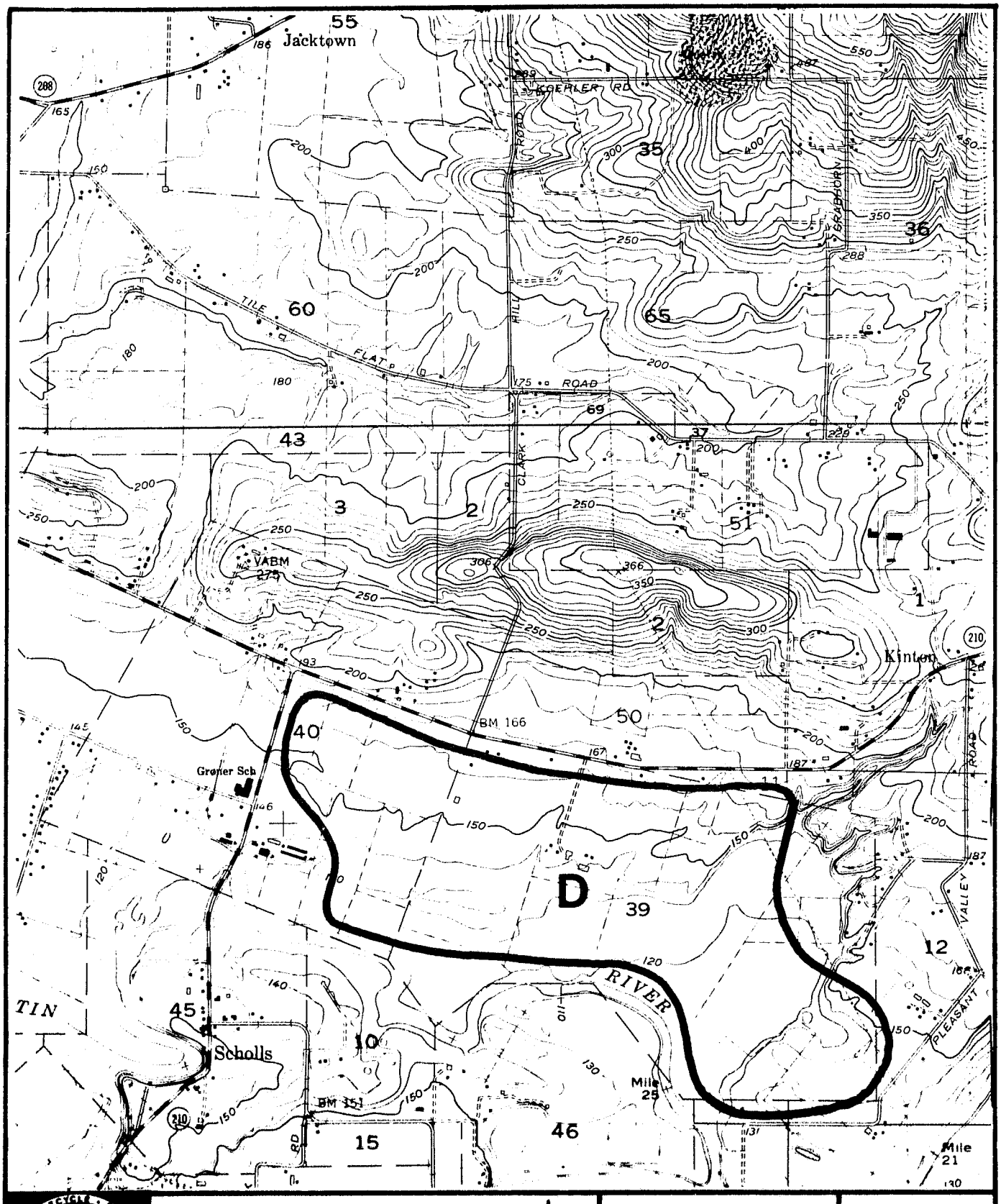

U.S.G.S. QUADRANGLE MAP SOURCE:

SCHOLLS

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