REGIONAL STORM WATER MANAGEMENT PLAN

FAIRFAX COUNTY, VIRGINIA

NOVEMBER, 1988

Prepared by

FAIRFAX COUNTY INTERAGENCY

STORM WATER MANAGEMENT COMMITTEE

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EXECUTIVE SUMMARY

To control the storm water runoff on a watershed basis, a system of regional storm water management facilities is superior to a large number of smaller, on-site facilities. Regional facilities are economically advantageous because they are more cost effective to construct and maintain. If properly designed and located, they function as a system to more effectively control the quantity and quality of runoff which results in better watershed protection and less environmental degradation to the stream network as development occurs. Regional facilities can be located to be more compatible with adjoining land uses, and, because there are fewer facilities, they provide an opportunity for higher levels of maintenance.

The Public Facilities Manual encourages the concept of regional storm water management as does the 1987 Fairfax County Goals Advisory Commission Report. As opportunities have arisen, County staff has pursued regional storm water management planning through the development process. An overall plan identifying the most appropriate locations for regional facilities would greatly improve this process.

To promote this concept of regional storm water management in Fairfax County, the Board of Supervisors requested that a prototype plan be prepared for a portion of Fairfax County. The County Executive appointed an Interagency Storm Water Management Committee composed of staff members to oversee this process.

In January, 1987, a contract was executed with the engineering firm of Camp, Dresser and McKee (CDM) to assist staff in development of the criteria and to prepare a regional storm water management plan for specified areas of the County. A study area of 122 square miles in the rapidly developing areas of the County was chosen for regional consideration. This study area includes portions of the following seven watersheds: Cub Run, Little Rocky Run, Difficult Run, Horsepen Creek, Sugarland Run, Pohick Creek (upstream of Burke Lake) and Long Branch (tributary to Accotink Creek).

The regional plan is now complete and is summarized in this document. The plan consists of a network of 134 detention facilities that will directly control 35 square miles of drainage area. Of these regional ponds, 31 are proposed to have permanent pools (wet ponds) and the remaining 103 are proposed to be "extended-dry" ponds.

It is proposed that the regional ponds be implemented through County projects, proffers, developer reimbursement agreements and joint County/developer projects. County funding for implementation will be obtained through a combination of General Funds, future Storm Bond Funds, Pro-Rata Share contributions, developer participation and possible future establishment of a storm water utility to generate funds for design, construction and maintenance. Detailed funding and implementation procedures are being developed in coordination with the building industry.

To successfully implement the Regional Storm Water Management Program in Fairfax County, the following actions must be taken:

- Adopt the regional storm water plan and pro-rata share system
- Establish an administrative and management control system for plan implementation
- Develop and adopt standards for design and construction of regional ponds
- Proceed with implementation of the regional ponds
- Pursue additional funding mechanisms
- Continue planning, adoption and implementation of regional detention in other areas of Fairfax County

INTRODUCTION

A regional storm water plan provides a cost effective system for storm water management. Regional storm water management systems offer benefits that are equal to or greater than on-site controls at a lower cost. Because fewer regional facilities are required to control a given watershed, the economies of scale in designing and constructing the facilities result in reduced capital and maintenance costs. Because fewer facilities will require maintenance, a regional plan will provide the opportunity for higher levels of maintenance than a system of on-site controls.

In addition, the regional facilities are strategically located within the watershed areas resulting in greater effectiveness in controlling the quantity and improving the quality of runoff to the downstream receiving waters. Regional facilities can also be located to provide a better compatibility with adjoining land uses whereas a system of on-site controls often result in facilities located adjacent to or near homes, play areas and other heavily used common areas.

PURPOSE

In compliance with Article 6, Section 6-0301 of the Public Facilities Manual and the recommendation set forth in the December, 1987 Fairfax County Goals Advisory Commission report, the concept of regional storm water management has been pursued by the County on a limited basis and, in some cases, achieved through developer cooperation, rezoning proffers, and joint County/developer projects. An overall plan that identifies the most appropriate locations for regional detention facilities and provides information on the size and function of the regional detention facilities will improve this process. The purpose of this plan is to identify specific sites for regional detention facilities for endorsement by the Board of Supervisors and adoption into the Comprehensive Plan. Staff from the Office of Comprehensive Planning (OCP), the Department of Environmental Management (DEM) and the Department of Public Works (DPW) will actively pursue preservation of the sites and implementation of the facilities after endorsement by the Board of Supervisors.

PLAN DEVELOPMENT

In June 1986, the Department of Public Works was instructed by the County Executive to form a staff committee to develop methods of maximizing the implementation of regional storm water management. The "Interagency Storm Water Management Committee" was then formed with representatives from the Department of Public Works (DPW), the Department of Environmental Management (DEM), the Office of Comprehensive Planning (OCP), the Fairfax County Park Authority (FCPA) and the Office of the County Attorney (OCA). The Committee's approach to this task was to hire a consultant to assist in the development of criteria for the design and implementation of regional storm water management, and to prepare a prototype plan for specified areas of the County. The engineering firm of Camp, Dresser and McKee (CDM) was selected and an engineering contract was executed in January, 1987.

A total area of 122 square miles within the rapidly developing portions of the County was chosen for regional consideration. The area of study encompasses portions of the following seven watersheds:

- Cub Run
- Difficult Run
- Horsepen Creek
- Little Rocky Run
- Sugarland Run
- Pohick Creek (drainage area upstream Burke Lake)
- Long Branch (tributary to Accotink Creek)

Figure 1 presents a map of the seven watershed boundaries and the shaded areas represent the study areas within the watersheds.

The recommended regional detention basin network for the plan was delineated through a multi-step planning process. Initially, the criteria for the location and design of regional facilities as outlined later in this report were developed and approved by the Committee.

In addition to "peak-shaving benefits" (i.e., flood protection and stream bank erosion control), the plan also considered the feasibility of designing the regional detention basins to serve as "best management practices" (BMP's) for water quality improvement. This was initiated due to the continual local, State, and Federal movement toward requiring the improvement of urban runoff water quality as evidenced by the Chesapeake Bay Agreement, annual recommendations made by the County's Environmental Quality Advisory Council (EQAC) and the upcoming expansion of the National Pollution Discharge Elimination System (NPDES) permit program by the U. S. Environmental Protection Agency (USEPA) to include permits for urban storm sewer discharge points. In addition, BMP's are an important component of the County's overall water quality management program for the Occoquan Basin which drains into the Occoquan Reservoir water supply.

Candidate sites for regional detention basins were determined based on the land availability, topography and available storage. A storage capacity check (required storage vs available storage) was performed for each candidate site through a simplified screening approach which determined management objectives (e.g. water quality protection, streambank erosion control and flood protection) which could be achieved at the site.

Two types of detention basins were evaluated for water quality control. They included wet detention basins and extended dry detention basins. When comparing extended dry facilities to wet facilities, the following characteristics were considered:

<u>EXTENDED DRY DETENTION PONDS (drain completely dry 48 hours after storm)</u>

- Generally less environmentally disruptive at the sites than wet facilities
- Provide sufficient water quality control to meet water quality improvement goals

- o Superior from a safety and liability standpoint
- o Less costly than wet facilities to construct and maintain

WET DETENTION PONDS (include a permanent lake)

- o More aesthetically pleasing than extended dry facilities, if properly maintained
- o More efficient in pollutant removal
- o Generally more hazardous from a safety viewpoint
- o More liability exposure for the County
- o More expensive to construct and maintain
- o Increase habitat diversity but more environmentally disruptive at the sites

The optimal plan would consist of a system of both wet and extended dry regional detention ponds that are strategically located to interact and produce the best possible reduction in peak flood flows while meeting established water quality goals. In addition, they should be located, constructed and maintained to minimize environmental disruption and be compatible with adjoining uses.

Given these considerations, wet detention basins were chosen as the preferred BMP for the critical Occoquan watershed. Extended dry detention basins were considered for the remaining watersheds. This approach will result in the most efficient and most cost effective regional system. The detention storage requirements for each type of basin are based on the percent imperviousness of the upstream land use. As watershed areas develop, the actual ground surface imperviousness may vary from the anticipated or "planned" imperviousness. Therefore, as actual development scenarios occur, it may be necessary or desirable to implement some of the extended dry detention ponds as wet ponds.

In addition to BMP design criteria, the regional detention basins were also designed to meet existing County performance standards for post-development erosion control and flood control. Erosion control criteria were considered for the regional detention ponds which would maximize reduction of the 2-year frequency storm. These facilities would ensure that the peak flow released from the detention basin for future land use conditions is equal to or less than the predevelopment peak flow. Flood protection for a 10-year frequency storm was also considered, with the performance standard involving the restriction of the peak flow for future land use conditions to the 10-year predevelopment peak flow at the facility. Assuming that sufficient storage capacity was available, the regional detention basin was sized to achieve both the 2-year and 10-year performance standards in addition to the BMP requirement. If available storage was insufficient for both 2-year and 10-year control, the regional detention facility was sized at a minimum to achieve the erosion control performance standard.

Hydrologic and hydraulic computer models were used to route the design storms (2-year and 10-year) through the selected detention ponds and throughout the stream channels of the study area watersheds. Peak flow reduction benefits

were analyzed immediately downstream from the regional detention basin site and at critical locations in each watershed. Because of various siting constraints, particularly existing or committed development that precluded the establishment of a regional detention facility, portions of each watershed could not be served by the plan. In order to compensate for areas which could not be served by the regional detention basin network, investigations were performed to develop detention basin designs which could release less than the predevelopment peak flows. Where adequate storage was available at a particular site, these "maximum efficiency" detention basins were sized to achieve a peak release rate set as low as of 33 percent of the predevelopment peak flow. Where storage was limited, "conventional" detention basins were sized to achieve a peak release rate set at the predevelopment peak flow.

In addition to evaluating the benefits of maximum efficiency detention ponds, detention pond releases and downstream hydrograph timing were analyzed to determine the watershed areas of greatest impact from upstream groups or clusters of regional detention basins. For those areas within the watershed which could not be controlled by regional detention basins due to siting constraints, the need for on-site detention was also evaluated.

Water quality benefits of regional detention basins were evaluated in terms of the reductions in annual nonpoint pollution loads from the watersheds. Conformance with the County's nonpoint pollution loading goals for the Occoquan Basin were achieved for the two Occoquan watershed study areas: Cub Run and Little Rocky Run. Significant water quality improvements will also be realized in the remainder of the study area watersheds.

CRITERIA

The following criteria was utilized in locating and designing the regional storm water management facilities.

LOCATIONAL CRITERIA

UPSTREAM DRAINAGE AREAS

- Ideally 100 to 300 acres
- Smaller drainage areas (less than 100 acres) may be considered on a case-by-case basis for highly impervious areas
- Larger drainage areas (greater than 300 acres) may be considered for certain situations where further upstream sites are not feasible or to take advantage of other particularly good locations

TOPOGRAPHY

- Conform to existing topography were possible
- Minimize required dam length
- Avoid excavation where feasible (excavation may be required in some cases to achieve the required permanent pool storage for wet detention basins)

SOILS

- o Avoid soils which exhibit geotechnical constraints

NONTIDAL WETLANDS AND CRITICAL ENVIRONMENTAL AREAS

- o Avoid these areas where feasible
- o Minimize impacts on high priority wetlands identified by Fairfax County
- o Minimize area of wetlands disturbance where it is not feasible to avoid them entirely
  - Assign highest priority to detention basin locations which impact no more than 10 acres of wetlands, preferably less than 1 acre (i.e., 404 Nationwide permit)
  - Assign lowest priority to detention basin locations which impact more than 10 acres of wetlands
  - Consider re-establishment of wetlands in wet pond forebay areas
- o Emphasize the use of dry detention basins where wetlands impacts would otherwise be significant

PROPERTY ACCESS

- o Minimize easement length
- o Ensure that sufficient area is available for maintenance vehicle access roads: 10 ft minimum width
- o Slope for access road: less than 10% preferred, 15% maximum
- o Easement width: 15 ft

ADJOINING LAND USE

- o Buffer zone to minimize encroachment: consider on a case-by-case basis
  - Property impacts: 100-year high water for detention basins should not inundate lots of 1 acre or less
  - Utilities: avoid encroachment on major utilities
  - Roads: the use of State road embankments as detention basin dams should be avoided
  - Historical/archaeological areas: solicit review of regional detention basin site map by Heritage Resources staff of the Environmental and Cultural Resources Branch of Fairfax County Office of Comprehensive Planning (OCP)

DESIGN STORMS (LEVEL OF PROTECTION)

- o Erosion control: 2-year storm
- o Flood protection: 10-year storm
- o Emergency spillway design
  - Less than 25 acre-ft of storage and less than 15-ft dam height: 100-yr storm
  - Between 25 and 35 acre-ft of storage and between 15 and 20 ft dam height: 1.5 x 100-yr storm
  - Between 35 and 50 acre-ft of storage and between 20 and 25 ft dam height: 2 x 100-yr storm up to 2.5 x 100-yr storm
  - Greater than 50 acre-ft of storage or greater than 25 ft dam height: 2.5 x 100-yr storm up to 5.0 x 100-yr storm (based on State Water Control Board regulations)
- o Water Quality Management
  - Extended dry detention basin: Public Facilities Manual design curve
  - Wet detention basin: 2-week average hydraulic residence time for permanent pool

NOTE: Provide sufficient coverage of BMP's in the County's portion of the Occoquan Basin to maintain annual total phosphorus loadings from future development at the 1980 existing/committed loading levels (25,100 lbs/year of total P) specified as a water quality goal in the County's 1982 Occoquan Basin Study.

STORAGE REQUIREMENTS

A. Peak Flow Control (Erosion and Flood Control)

- o Initially base "storage-release rate" combinations on predevelopment peak discharge releases for appropriate design storm (i.e., 2-year and/or 10-year) at site. It may be necessary to reduce the initial detention basin release rates (i.e., increase required storage) to achieve watershedwide performance standards.

B. Water Quality Management

- Fairfax County design criteria for extended dry; two-week average residence time for wet

C. Land Use Assumption for Facility Drainage Area

- Post-development land use assumptions for storage calculations:
  - Compare existing zoning and comprehensive plan for the facility drainage area: select most intensive land use
  - Post-development land use should be based on total amount of urban development in the facility drainage area (i.e., rather than on the incremental new development alone): this is a conservative approach which will maximize the benefits of the regional detention basin
- Assume predevelopment land use is 100% undeveloped (wooded) even if there is some existing urban development in the facility drainage area: this is a conservative approach which will maximize the benefits of the regional detention basin
- Land uses designated as "mixed use" in the County Comprehensive Plan will be further defined by the County (e.g., percent imperviousness) on a case-by-case basis

D. Effectiveness of Existing Upstream Detention Basins

- Ignore any existing on-site detention basins located upstream of the regional detention basin site (except for major "regional-type" detention pond located on individual development sites): this is a conservative approach which will maximize the benefits of the regional detention basin

E. Freeboard

- Accepted engineering criteria will be used to establish freeboard requirements for the regional detention pond
- For preliminary screening of alternate detention basin sites, a freeboard of 1.0 ft above the design flow depth in the emergency spillway was used

DIMENSIONS OF REGIONAL DETENTION PONDS

A. Length-Width Ratio

- o Maximize L/W rations: preferably 2:1 or greater
- o Minimize short-circuiting potential

B. Side Slopes Along Shoreline: preferably 5H:1V or flatter

- o Reduce erosion potential
- o Promote wetland vegetation: this will minimize free-floating algae
- o Minimize safety hazards
- o Improve aesthetics
- o Facilitate maintenance activities

C. Permanent Pool: Wet Detention Basin

- o Surface Area: preferably no less than 5 acres (to facilitate maintenance), although basins with surface areas down to about 3 acres will be considered on a case-by-case basis
- o Mean Depth (storage volume divided by surface area): 3 to 10 feet
  - Shallow enough to prevent vertical thermal stratification
  - Deep enough to minimize algal blooms
- o Maximum Depth: ideally 15 feet, but no greater than 20 feet

THE REGIONAL STORM WATER MANAGEMENT PLAN

The Regional Storm Water Management Plan consists of a regional detention basin network which will provide water quality and erosion/flood control benefits for the seven watershed study areas at a total County cost considering both capital costs and maintenance costs which is less than the projected County maintenance cost of the on-site detention systems to serve the same area. Storm water management planning is an on-going process and, in order to meet the County's needs, working maps, screening evaluation information for detention basin sites, hydrologic and hydraulic computer models and initial storage check analyses shall be utilized by the County for continual updating of the plan.

As shown on the attached maps, 134 regional detention ponds are recommended in this master plan and they directly control approximately 35 square miles of drainage area. A detention pond summary follows:

Watershed	Total Number	Wet	Dry	Drainage Area Controlled (ac)	Total Top of Dam Storage (ac. ft.)
Cub Run	31	20	11	4,680	824
Little Rocky Run	13	11	2	2,068	254
Difficult Run	63		63	11,099	1,001
Horsepen Creek	7		7	879	127
Sugarland Run	5		5	991	107
Pohick Creek	8		8	1,107	110
Long Branch	7		7	1,197	207
	134	31	103	22,021	2,630

Specific technical information pertaining to each facility is available from the Department of Public Works, Utilities Planning and Design Division.

IMPLEMENTATION

With Board of Supervisors' approval, the County will proceed to develop an implementation plan for these facilities. This implementation plan will take into consideration the interim effects of development on the downstream area prior to the regional ponds being constructed. The formal adoption of this regional plan and identification of the facilities' locations will be accomplished as part of the review process of the Comprehensive Plan Policy element, currently underway.

It is proposed that the regional ponds be implemented through County projects, proffers, developer reimbursement agreements and joint County/developer projects. County funding for implementation will be obtained through a combination of General Funds, future Storm Bond Funds, Pro-Rata Share contributions, developer participation and possible future establishment of a storm water utility to generate funds for design, construction and maintenance.

All affected agencies will set up internal administrative and management controls to monitor and coordinate development in the regional watersheds to manage the implementation and updating of the plan. It should be noted that although the Plan identifies specific sites as being either wet or extended dry facilities, as development actually progresses, it may be necessary or desirable to convert some extended dry facilities to wet and vice versa. In addition, the plan incorporates some flexibility to shift pond locations to some degree in order to improve implementation. As modifications occur, staff will continually update the plan's database to assure compliance with the overall plan goals.

In addition, staff will develop standards for the design and construction of regional ponds and will continue the regional planning effort in other areas of Fairfax County.

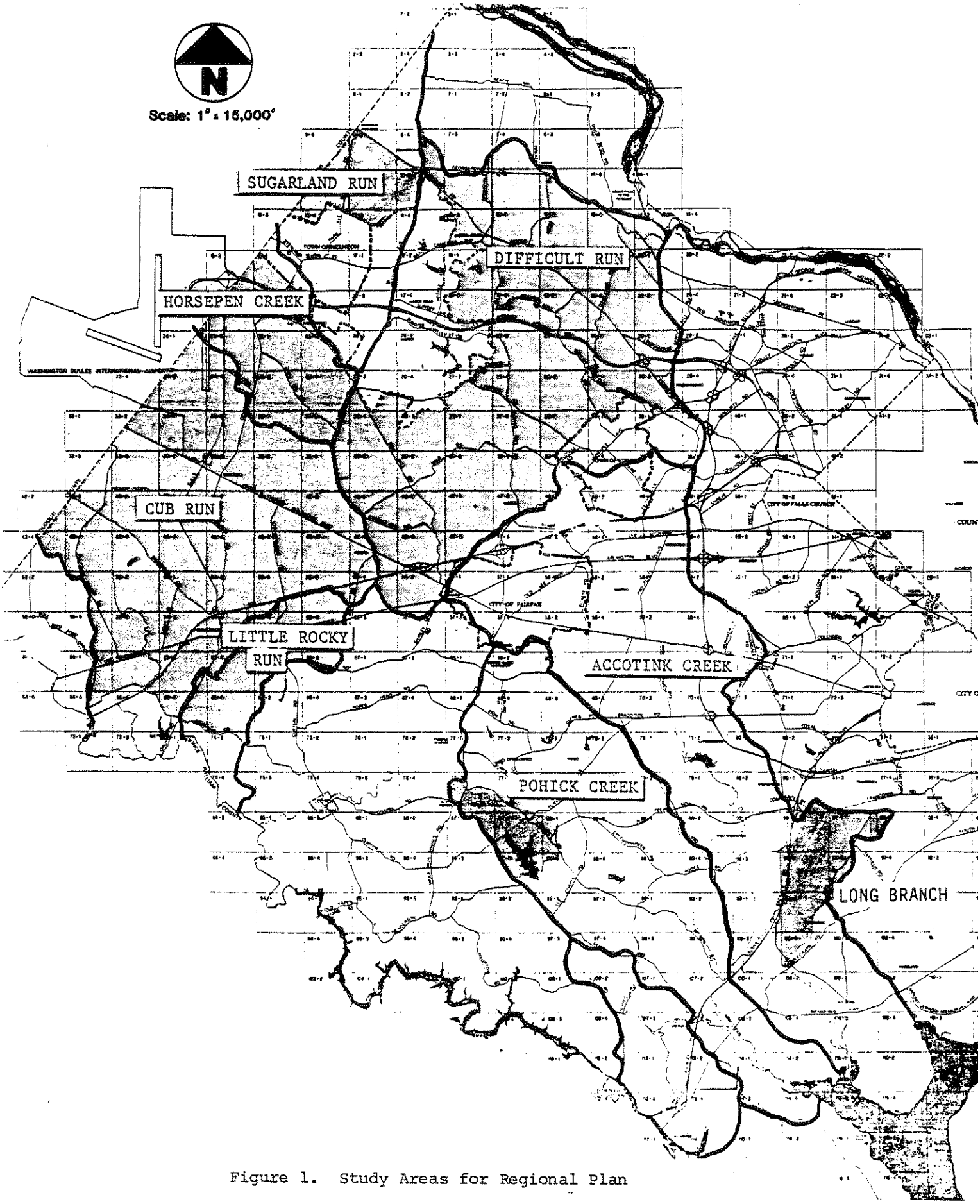


Figure 1. Study Areas for Regional Plan

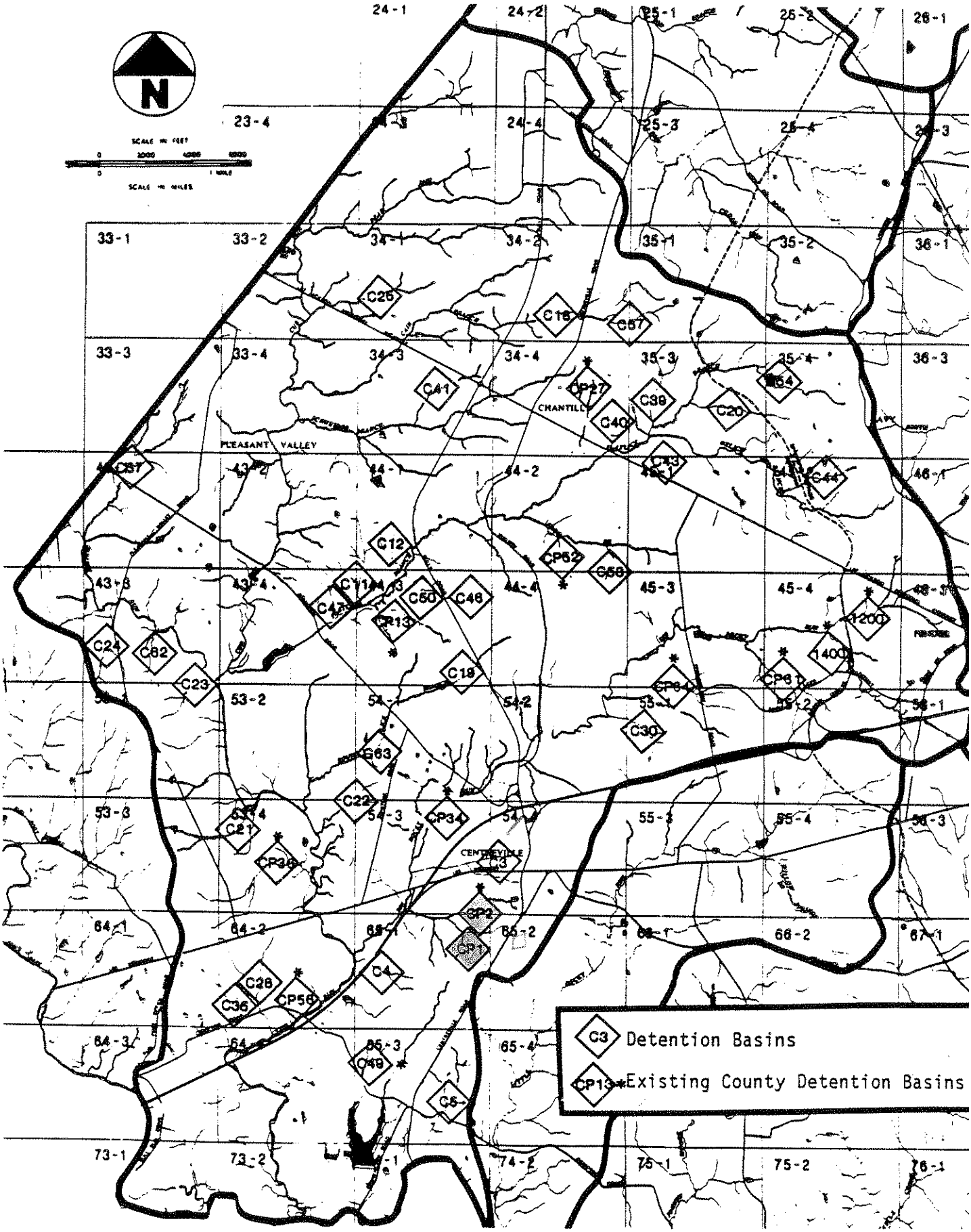
REGIONAL POND LOCATION MAPS

FOR

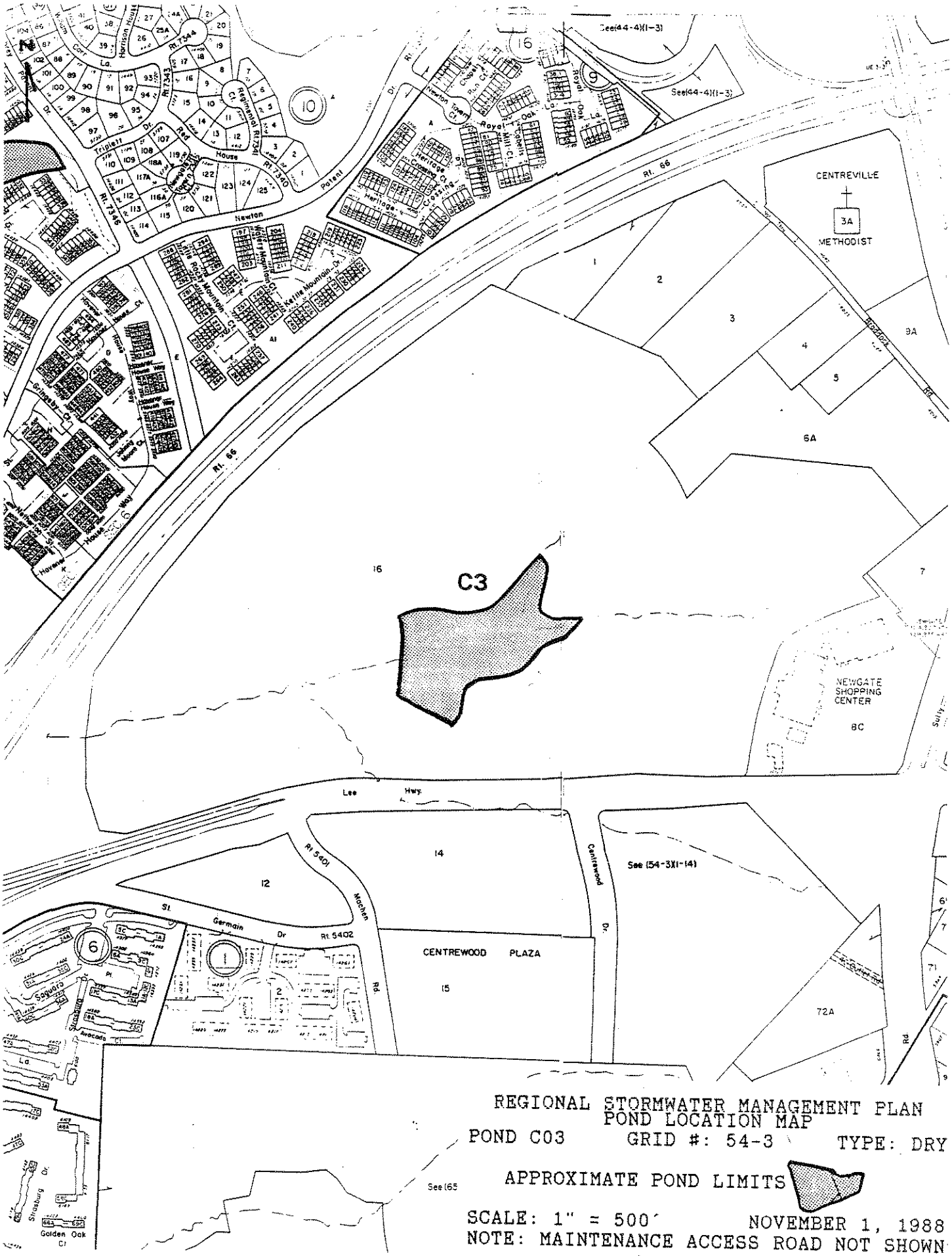
CUB RUN

- Vicinity Map for Regional Pond Locations . . . . . Page 15

- Individual Regional Pond Location Maps . . . . . Page 16 - 46



Cub Run: Vicinity Map for Regional Pond Locations



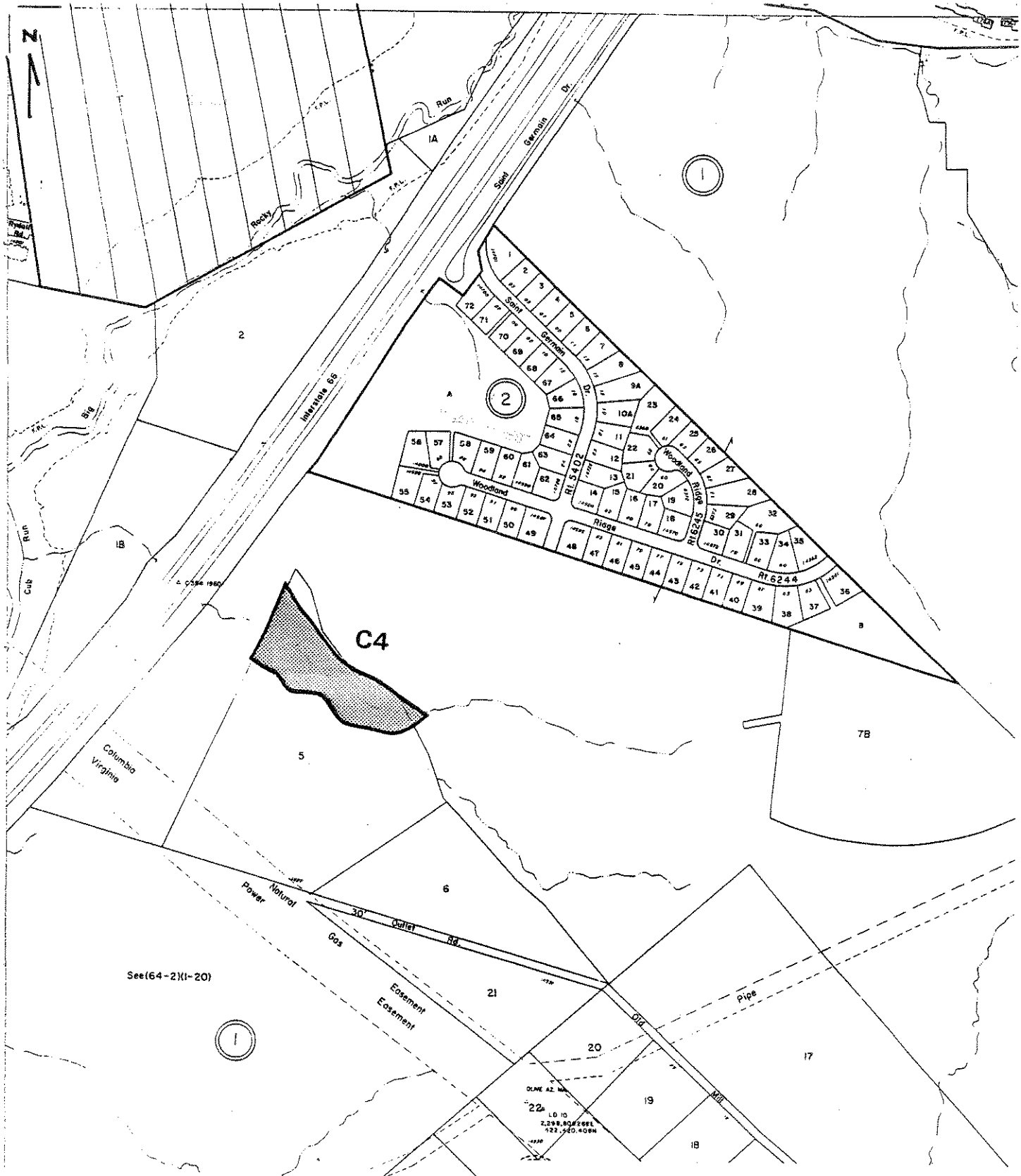
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C03 GRID #: 54-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C04 GRID #: 65-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

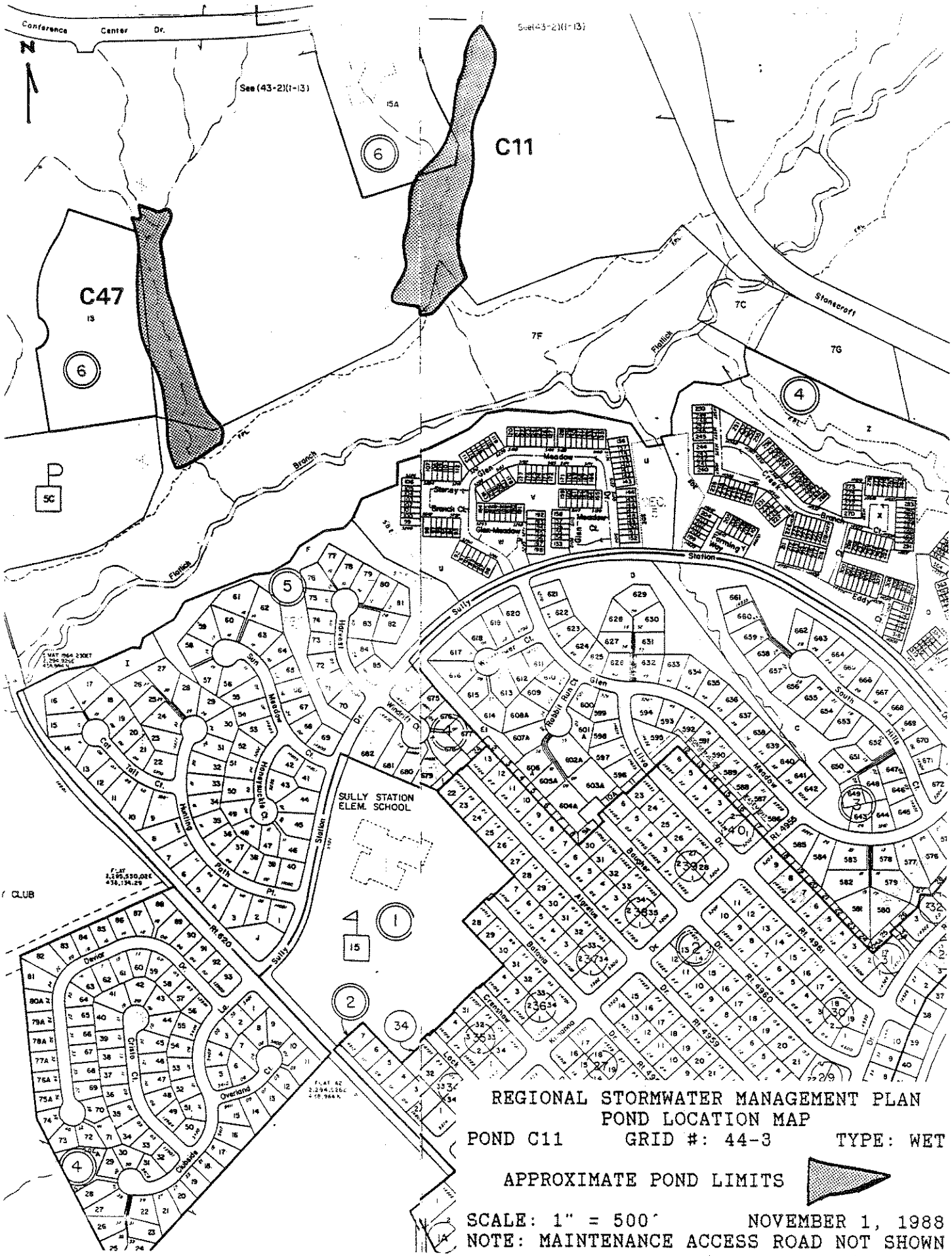
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C05 GRID #: 65-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

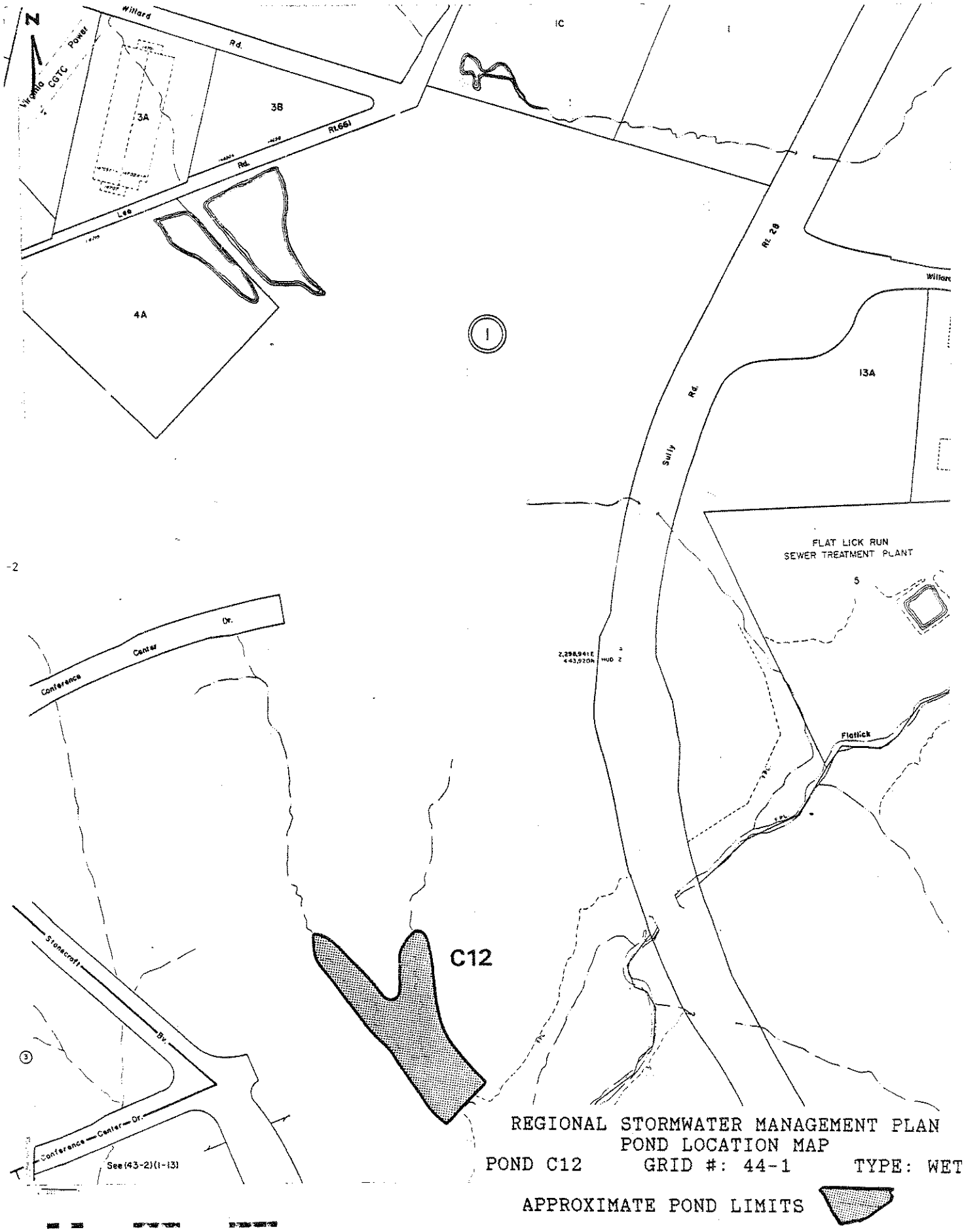
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C11 GRID #: 44-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



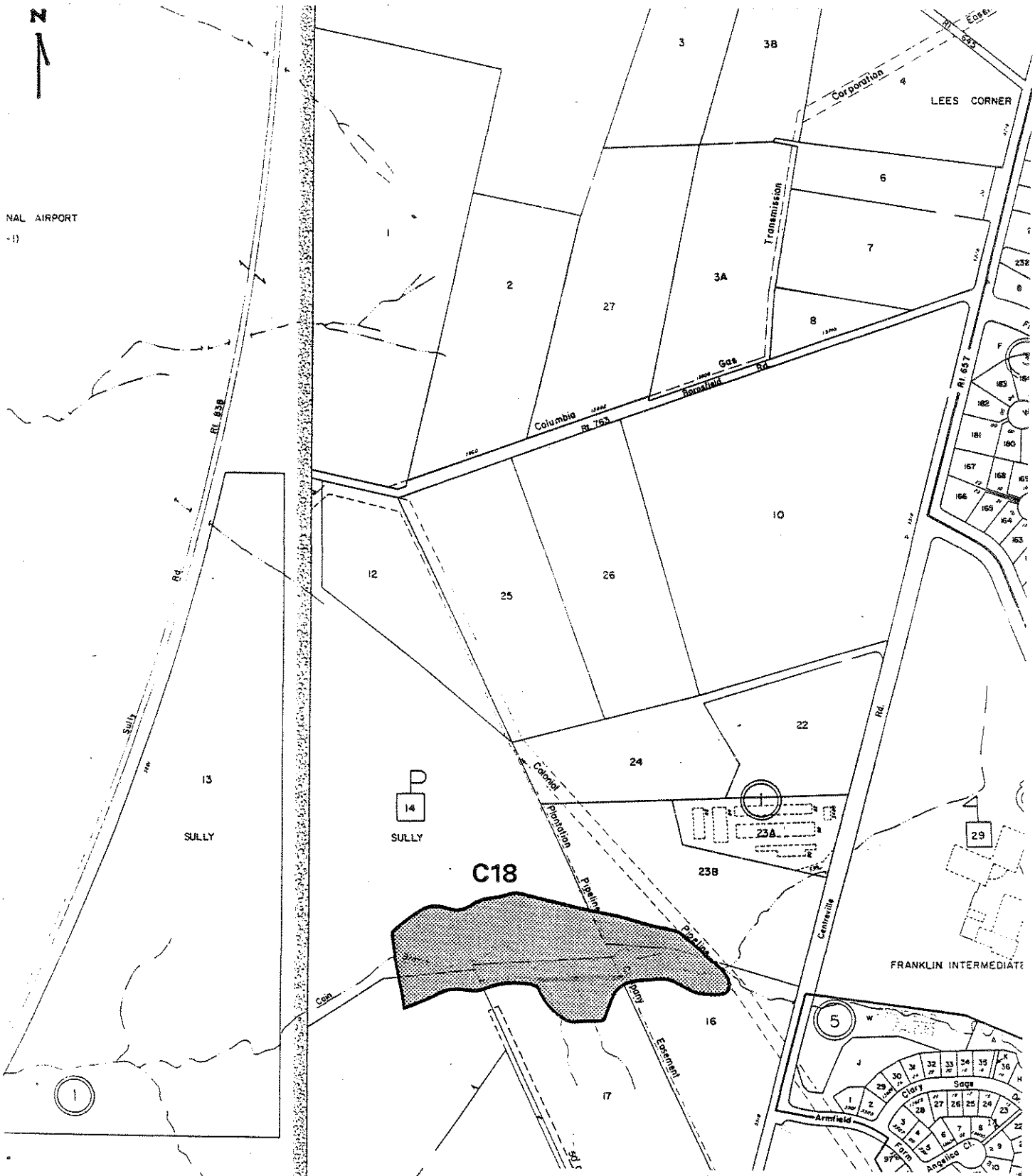
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C12 GRID #: 44-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



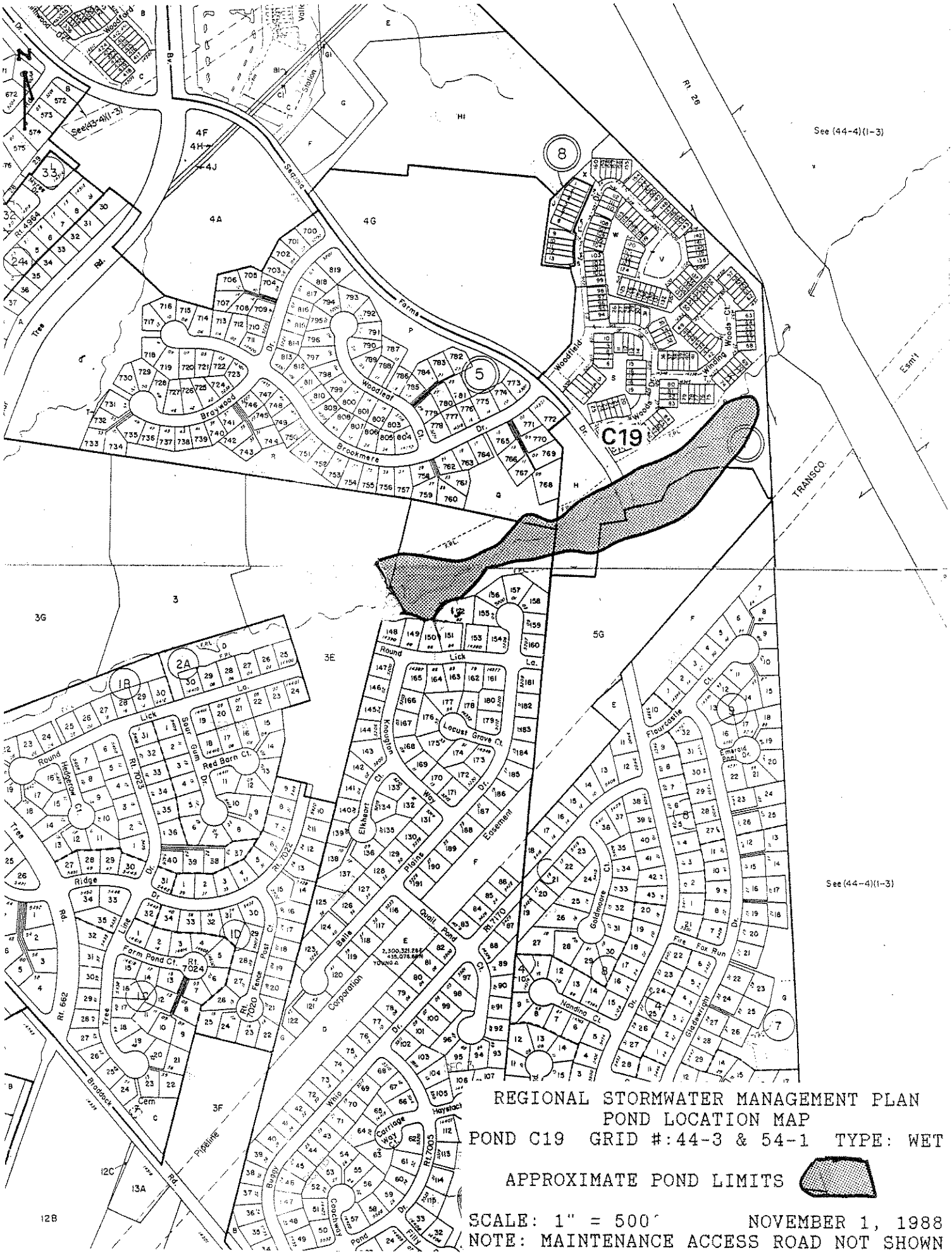
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C18 GRID #: 34-2 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

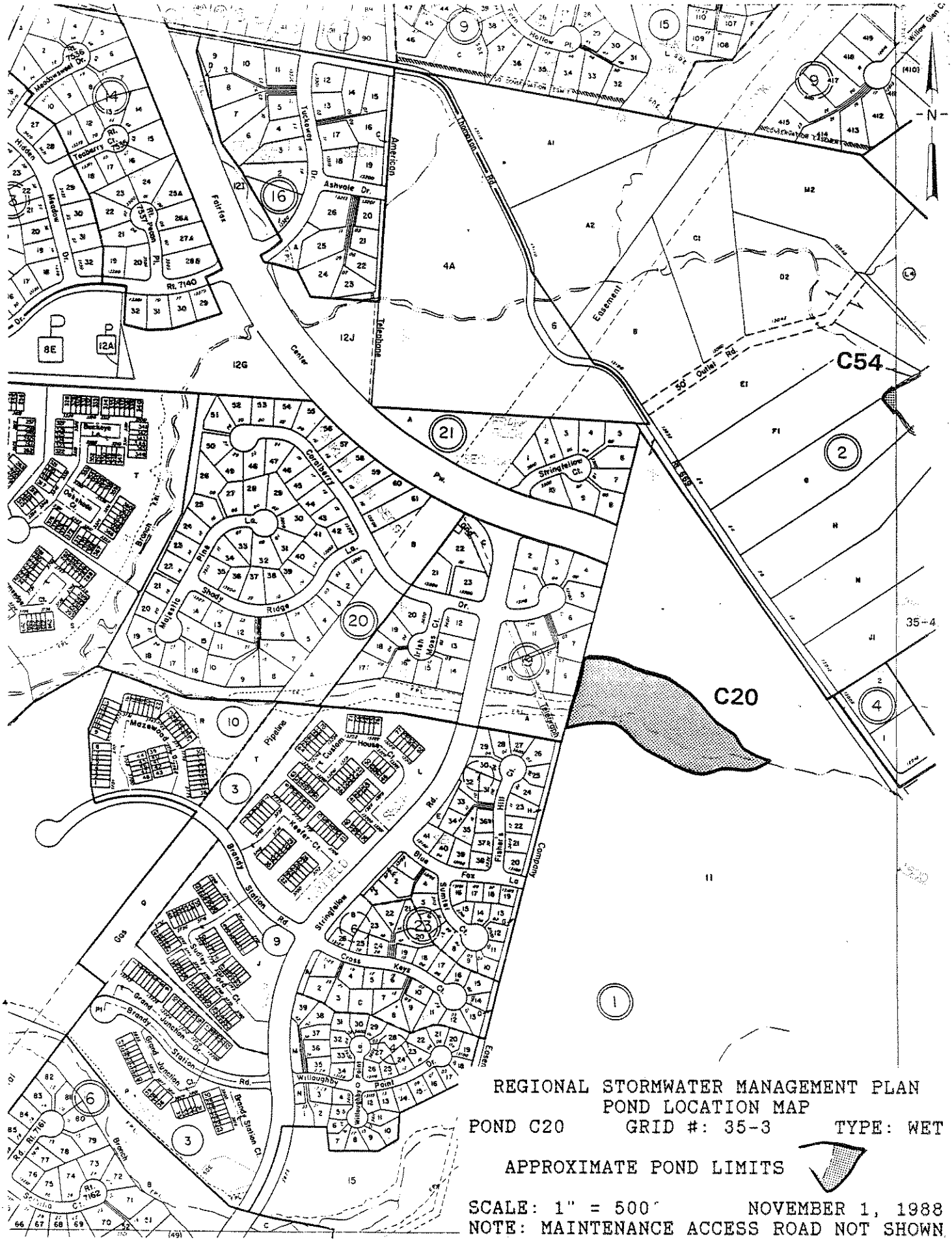
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C19 GRID #:44-3 & 54-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C20 GRID #: 35-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

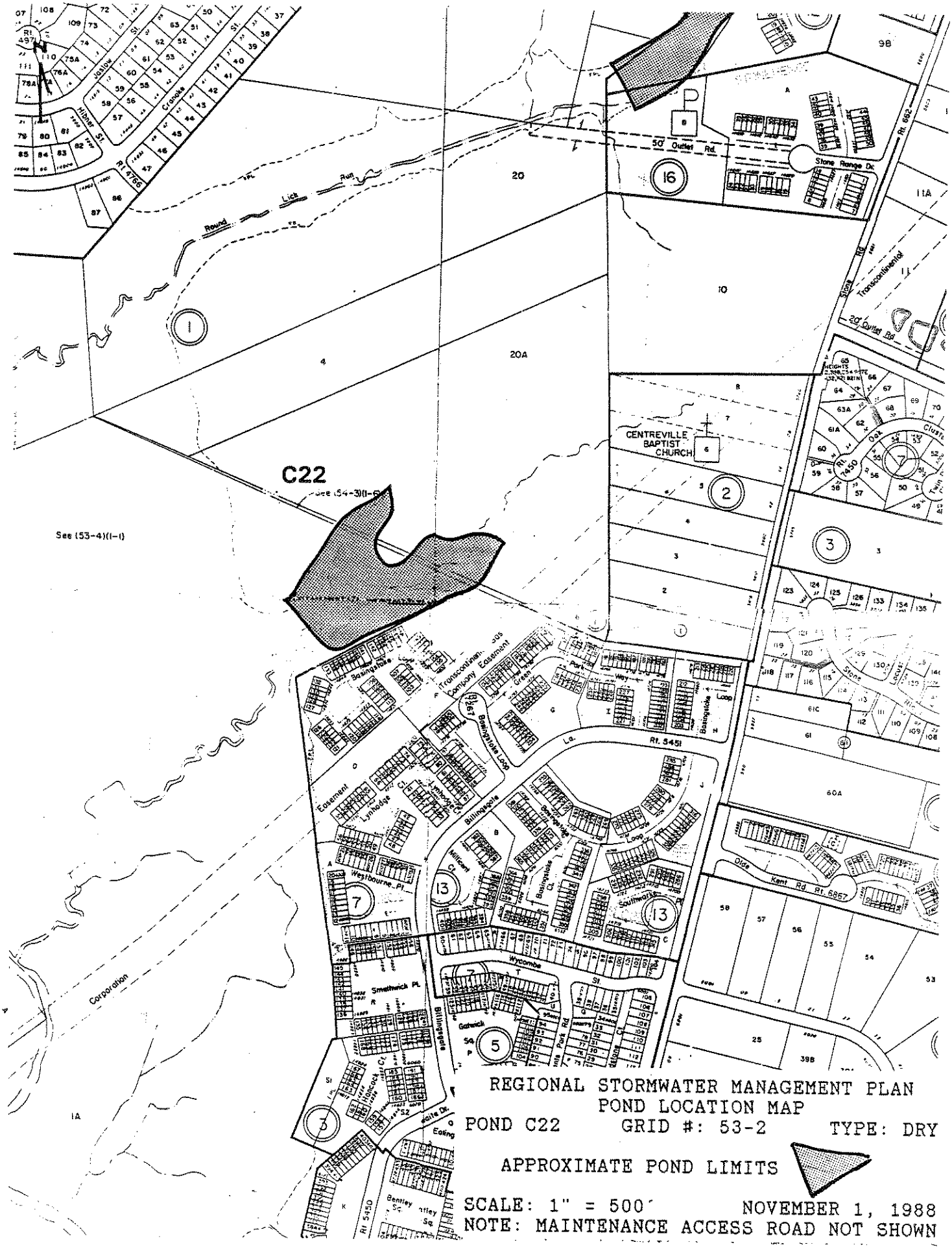
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C21 GRID #: 53-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

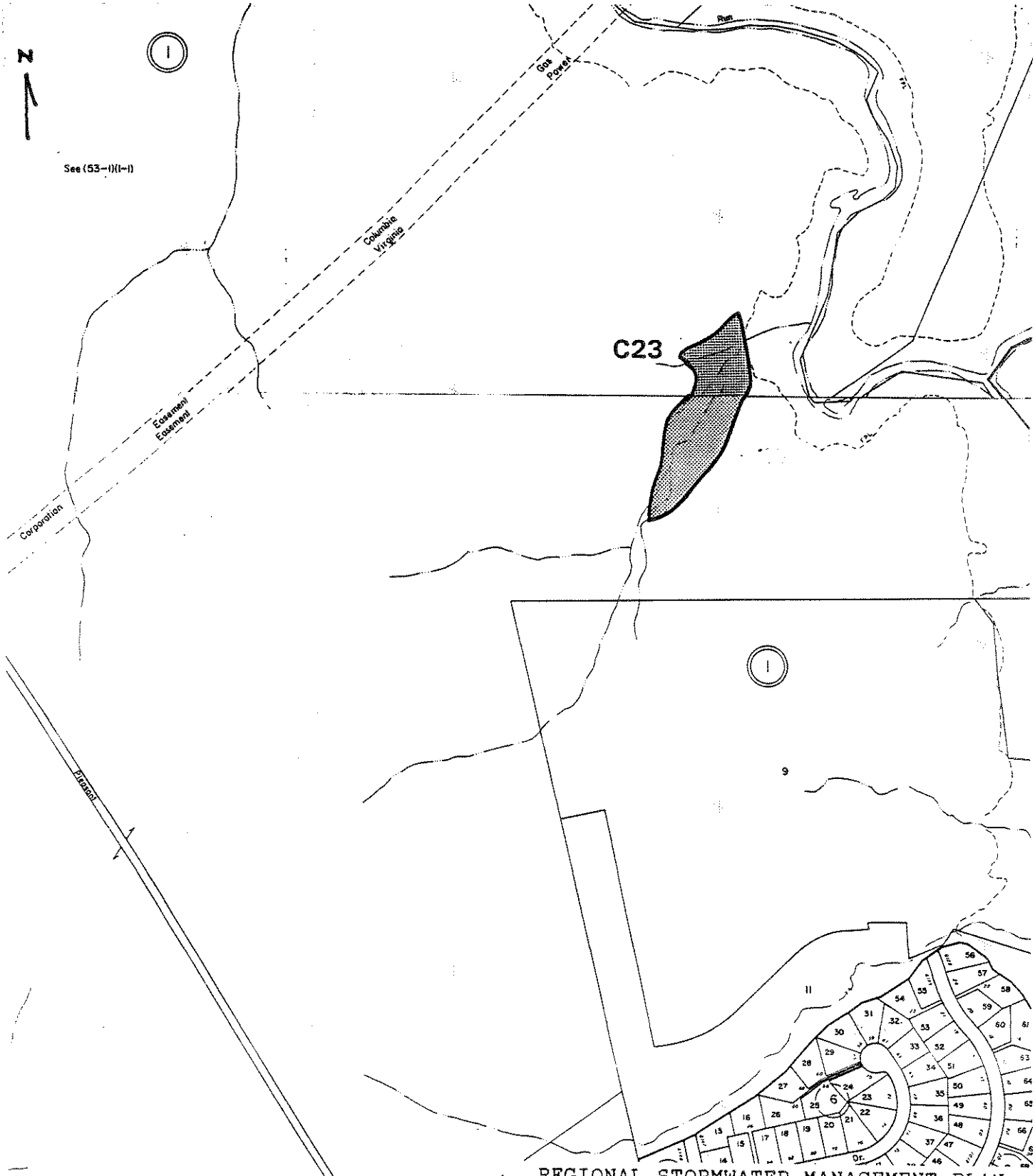
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C22 GRID #: 53-2 TYPE: DRY

APPROXIMATE POND LIMITS

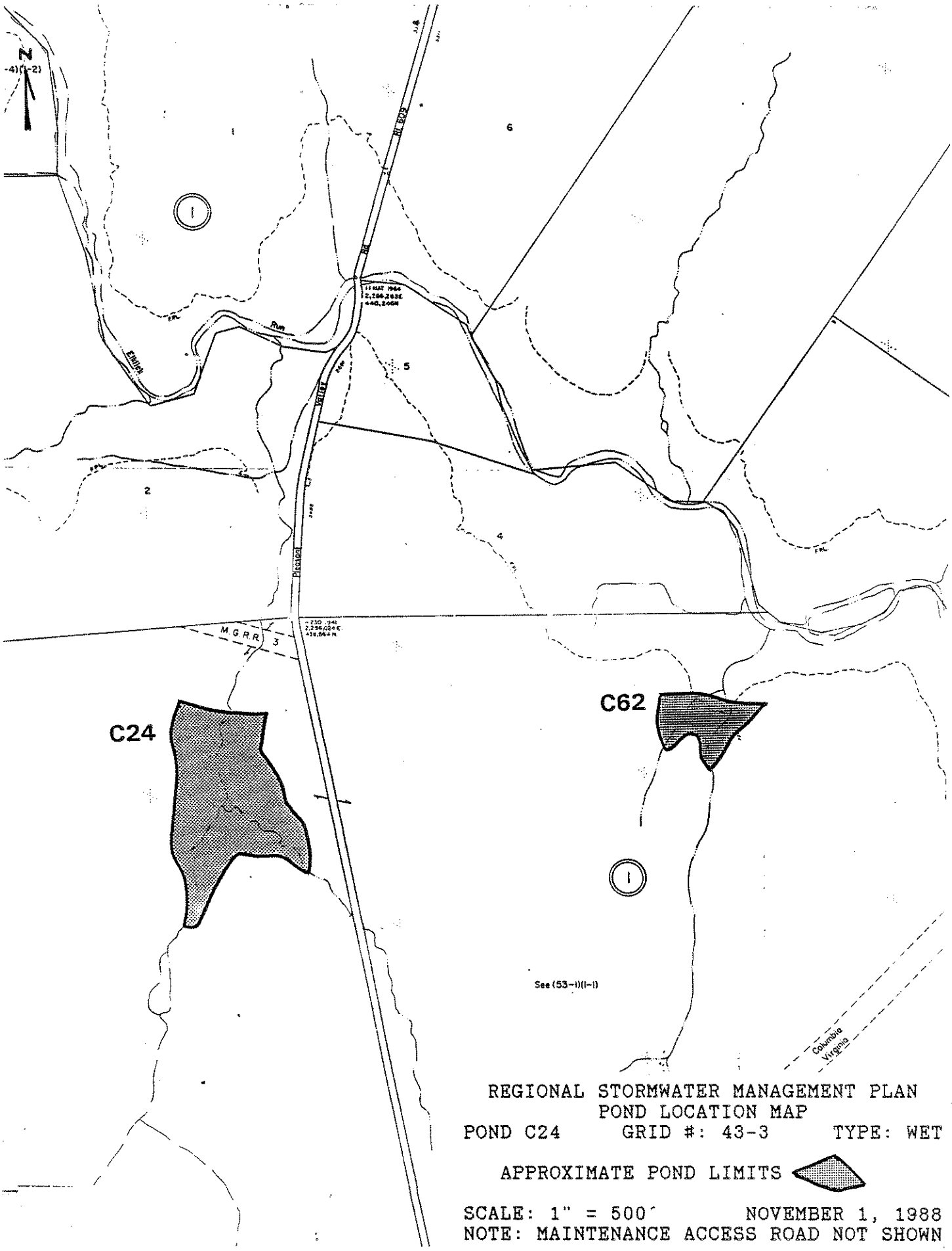
SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C23 GRID #:43-1 & 43-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

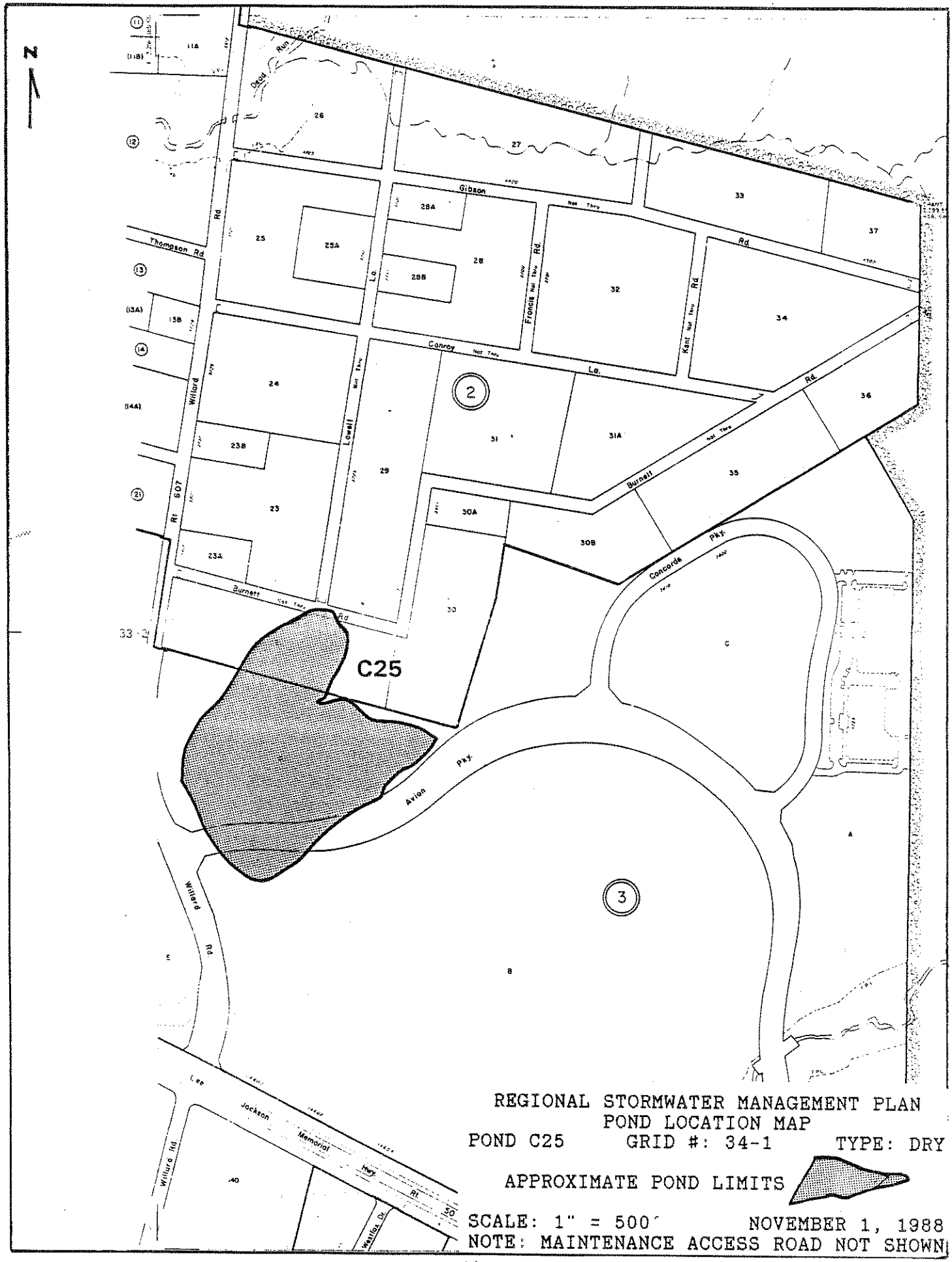


REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C24 GRID #: 43-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

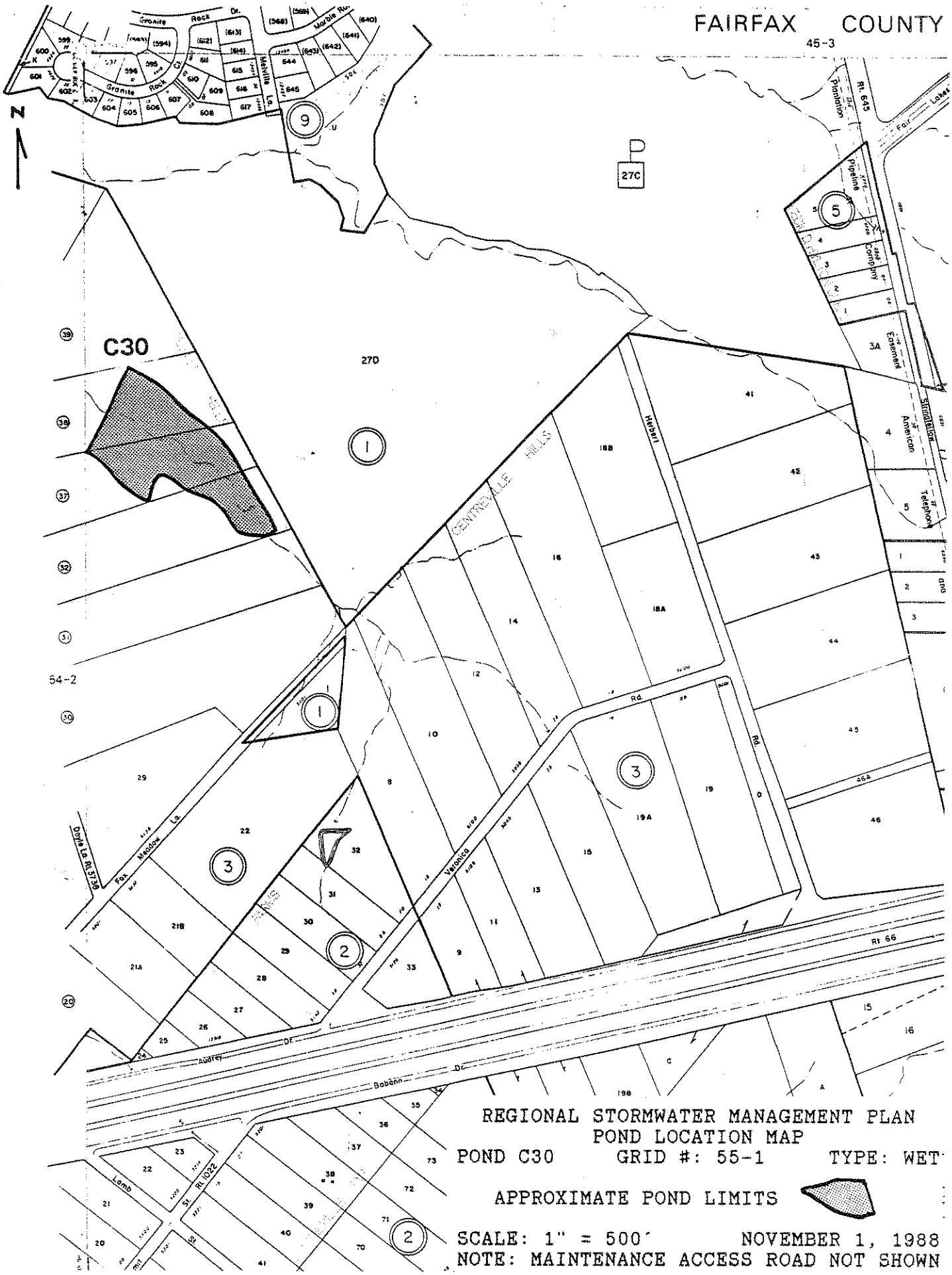
POND C25 GRID #: 34-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN


C28
C35
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C28 GRID #: 64-2 TYPE: WET
APPROXIMATE POND LIMITS
SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

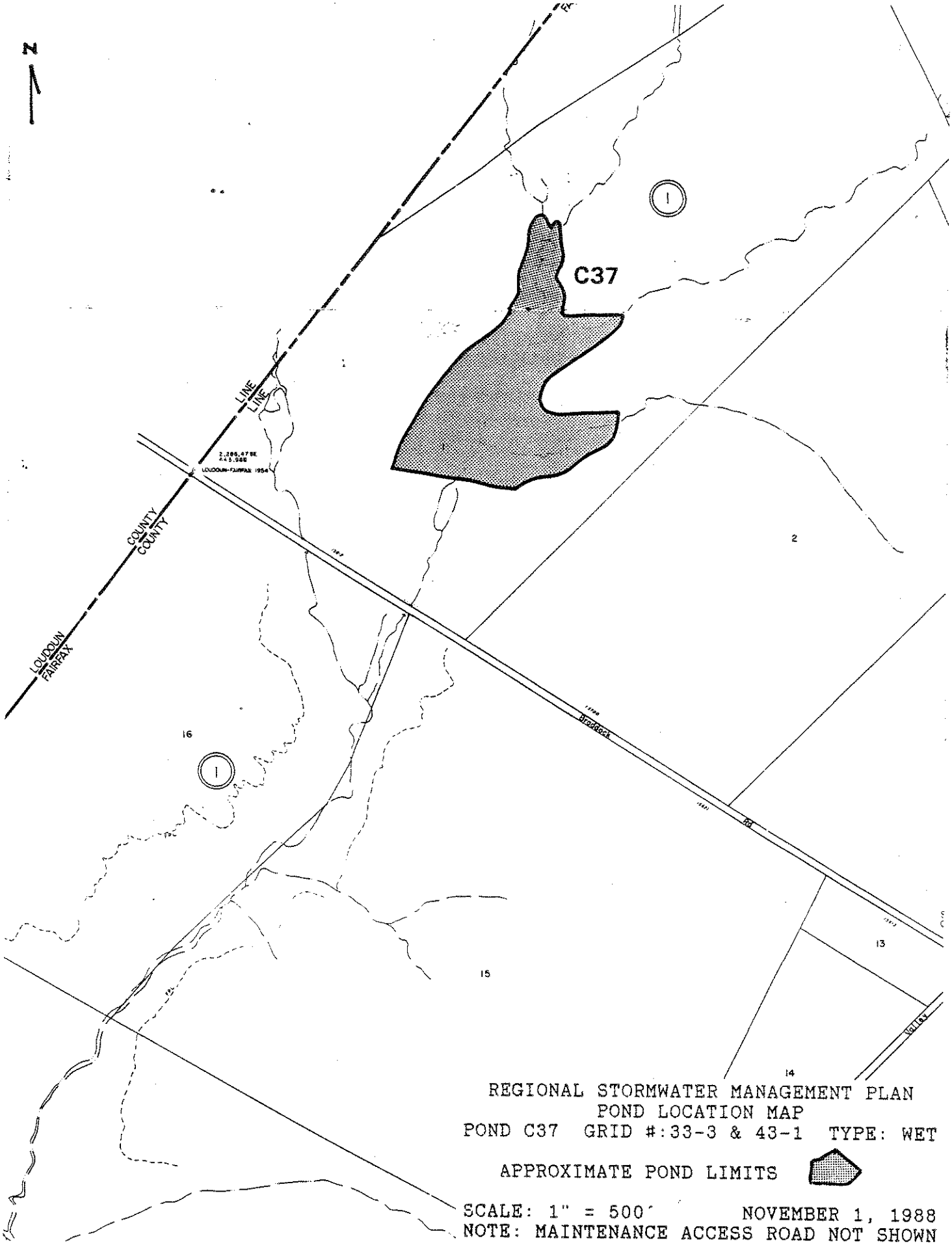
POND C30 GRID #: 55-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

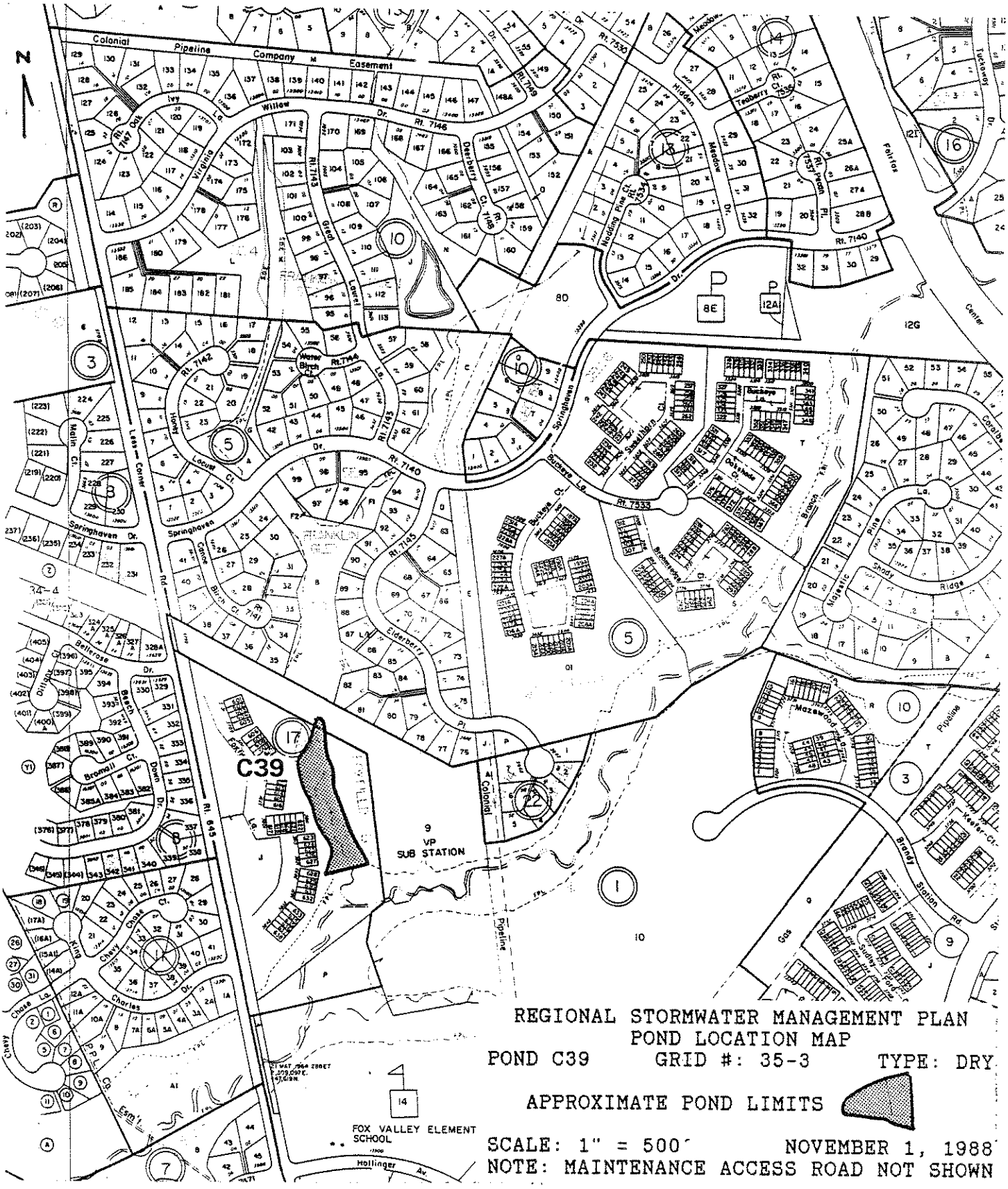

C28
C35
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C35 GRID #: 64-2 TYPE: WET
APPROXIMATE POND LIMITS
SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C37 GRID #:33-3 & 43-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C39 GRID #: 35-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

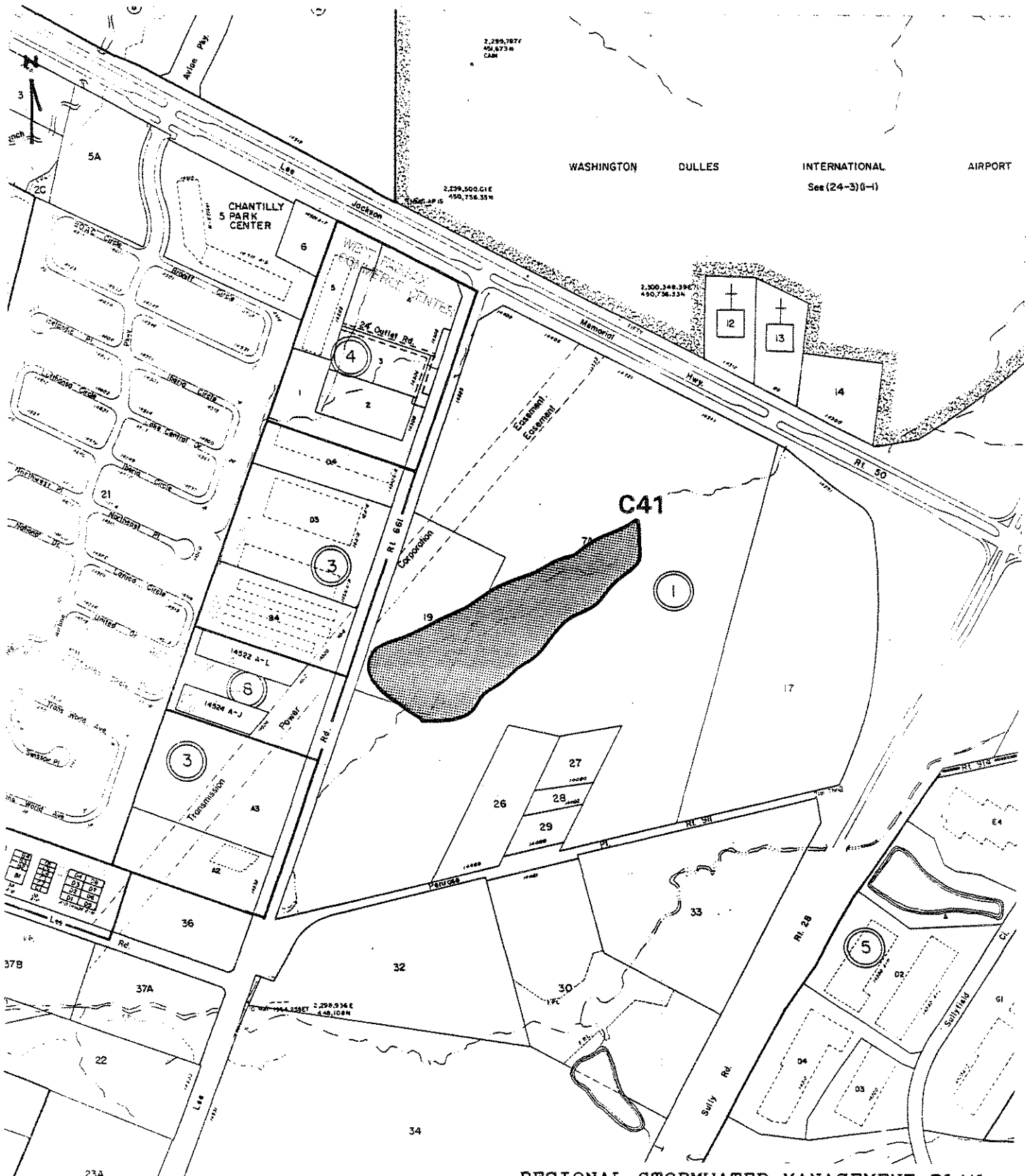
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C40 GRID #: 34-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C41 GRID #: 34-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

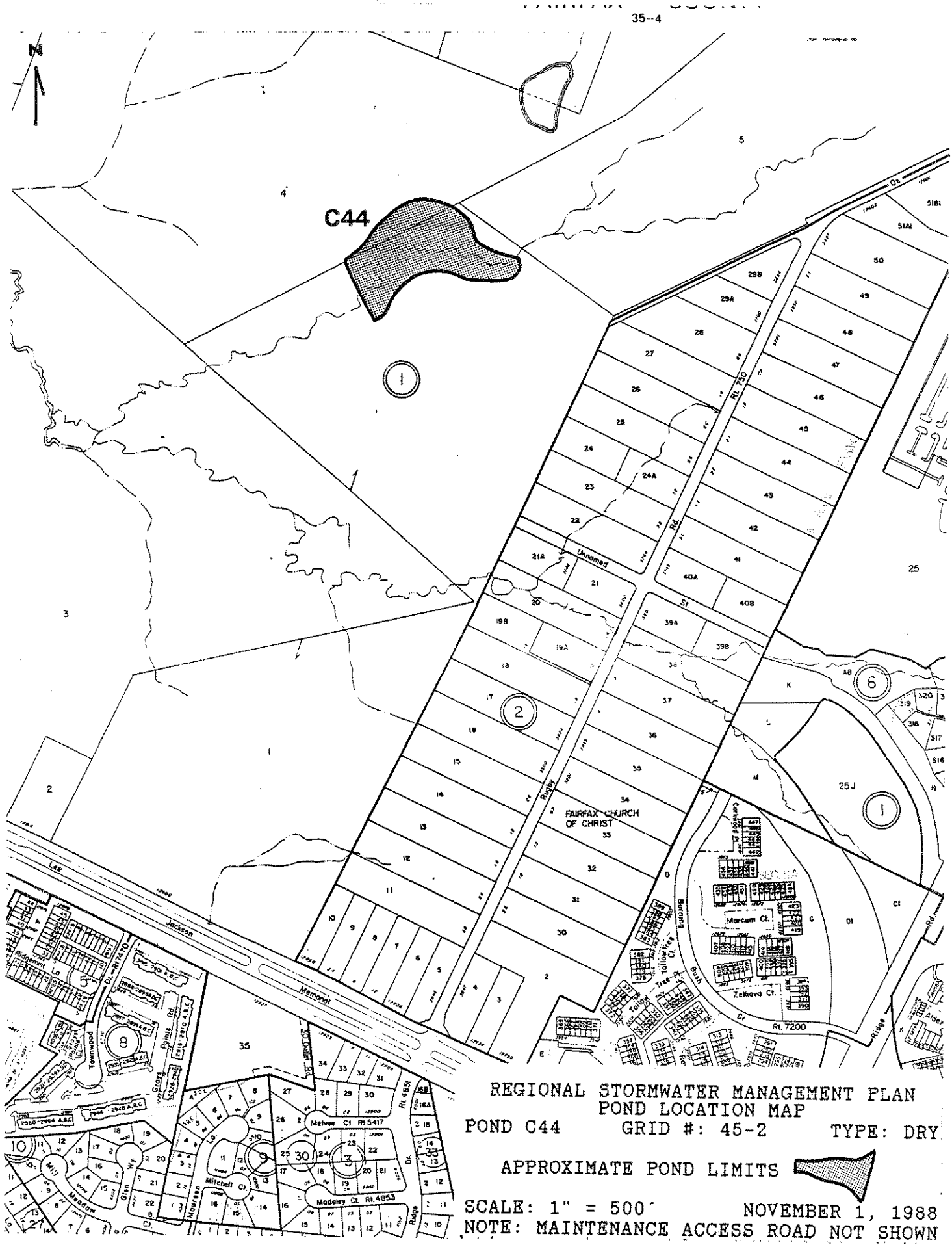
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C43 GRID #: 45-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500´ NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



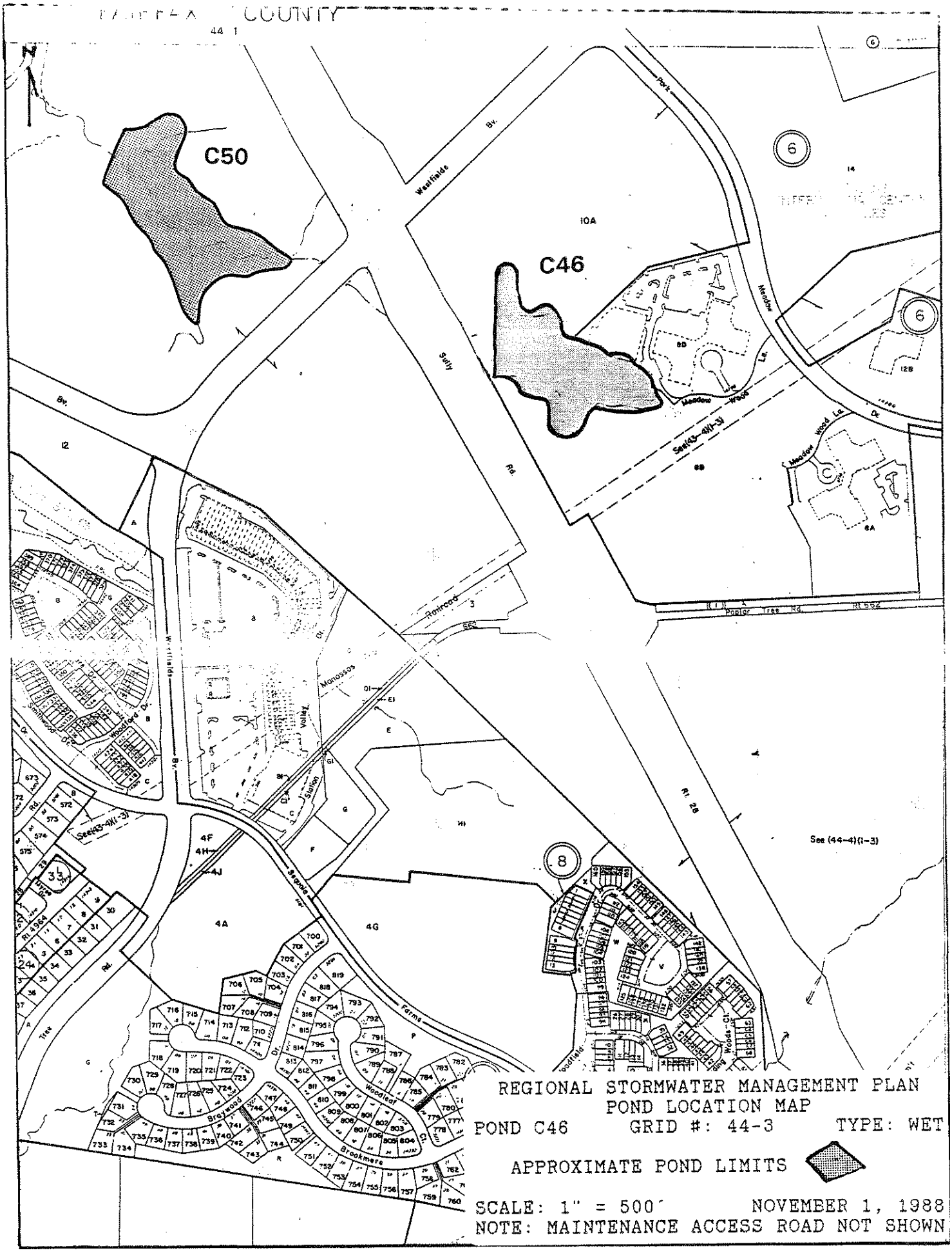
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C44 GRID #: 45-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



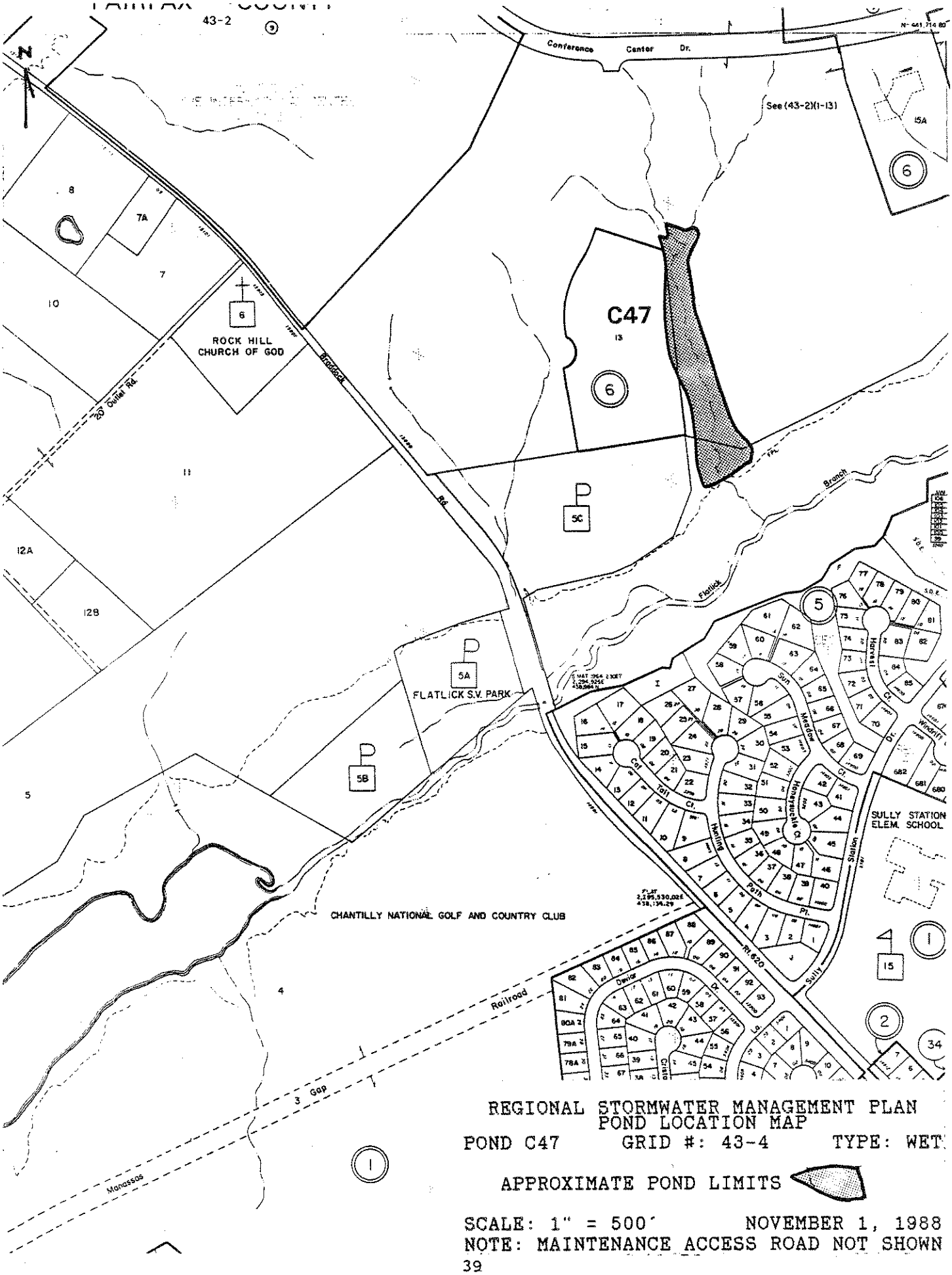
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C46 GRID #: 44-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C47 GRID #: 43-4 TYPE: WET

APPROXIMATE POND LIMITS

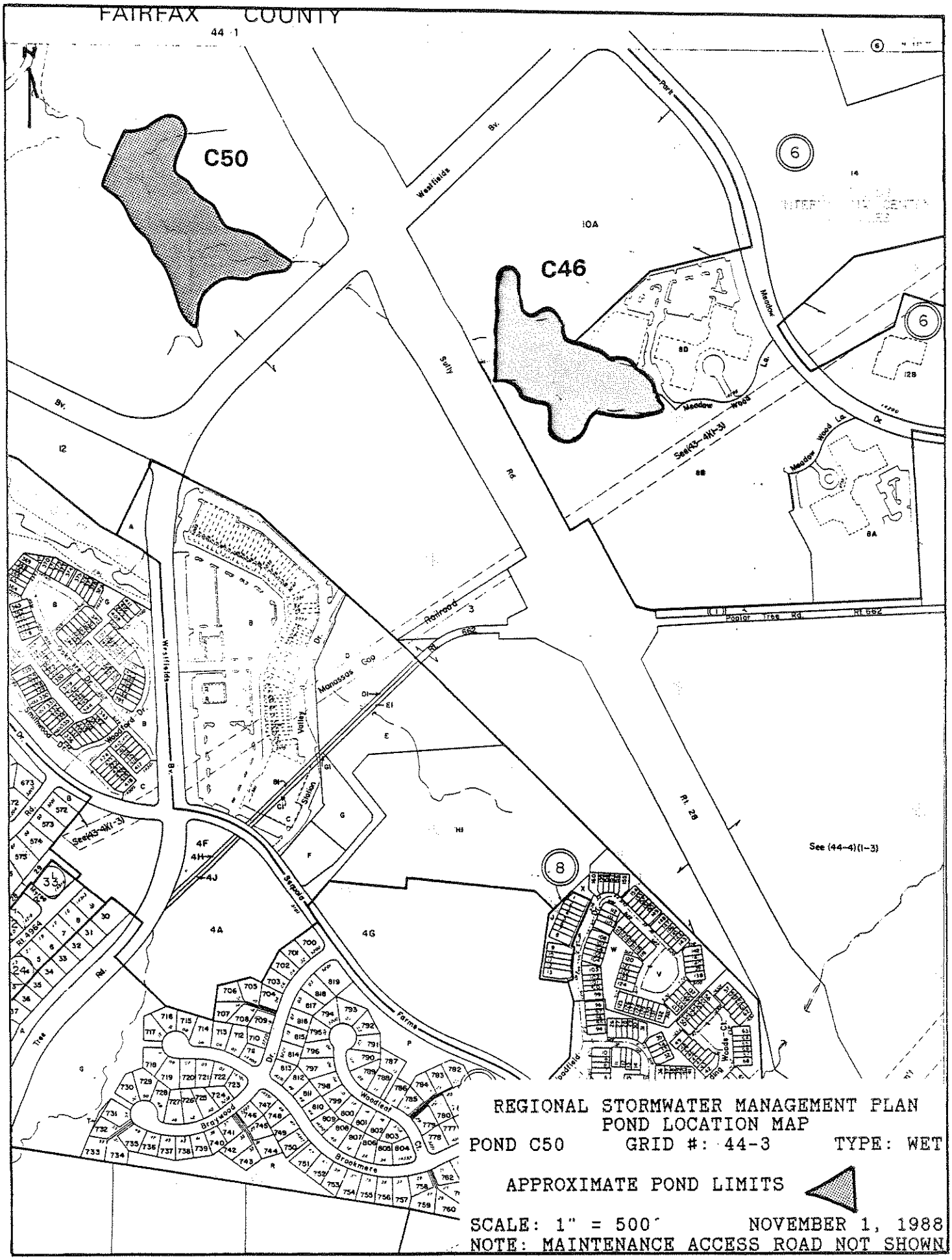
SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C49 GRID #: 65-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



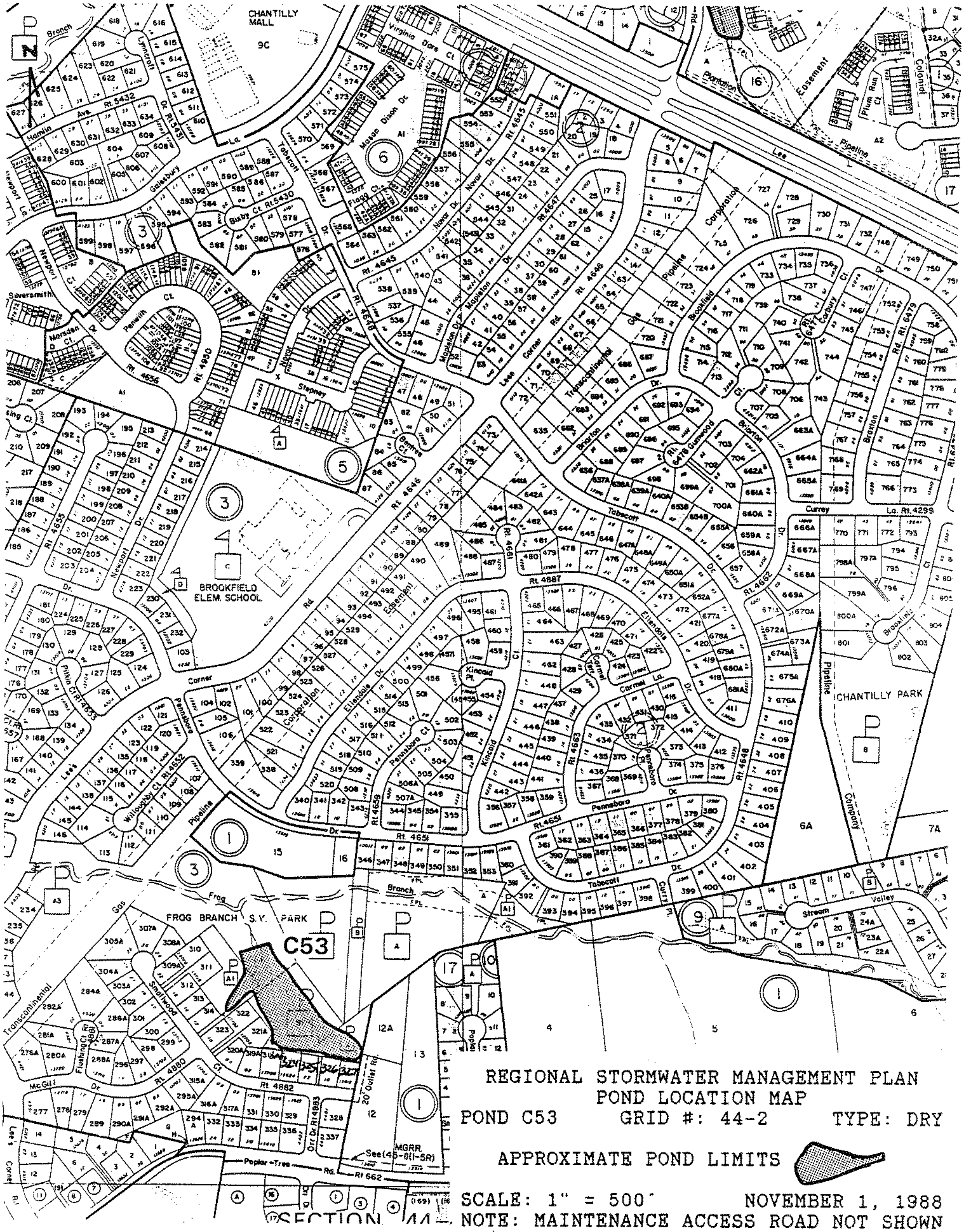
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C50 GRID #: 44-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C53 GRID #: 44-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

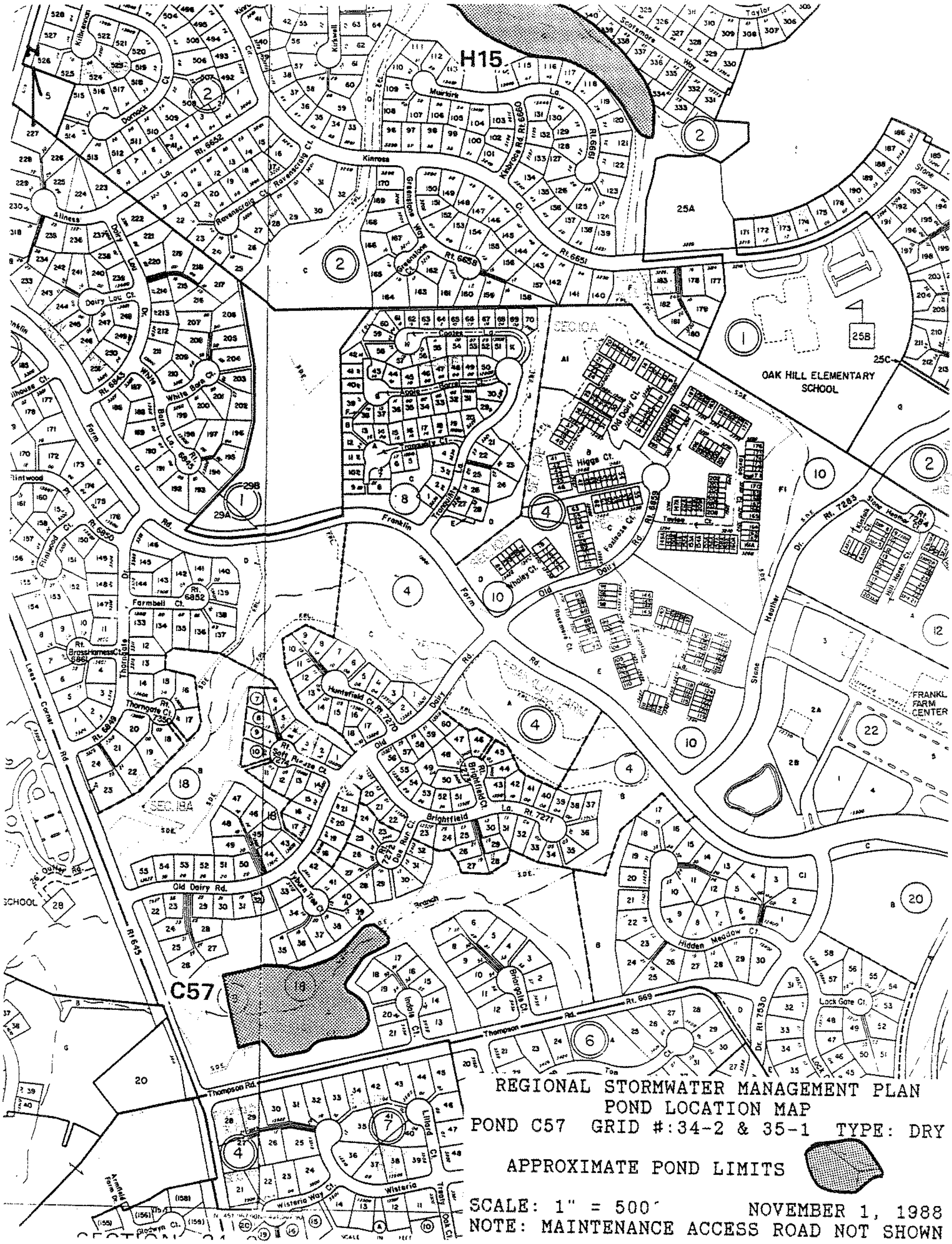
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

(1) POND C54 GRID #: 35-4 TYPE: DRY

APPROXIMATE POND LIMITS

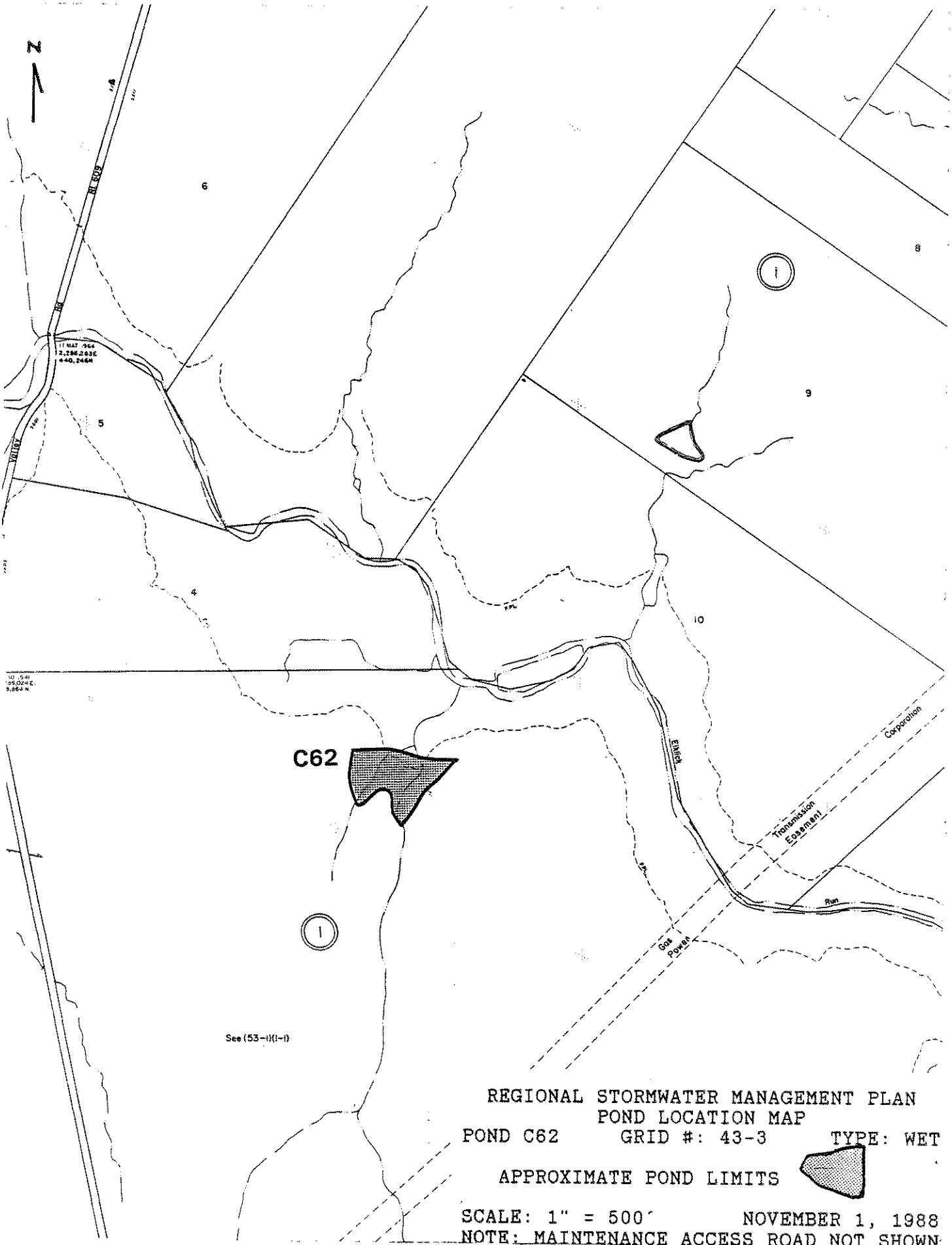
SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C57 GRID #:34-2 & 35-1 TYPE: DRY

APPROXIMATE POND LIMITS

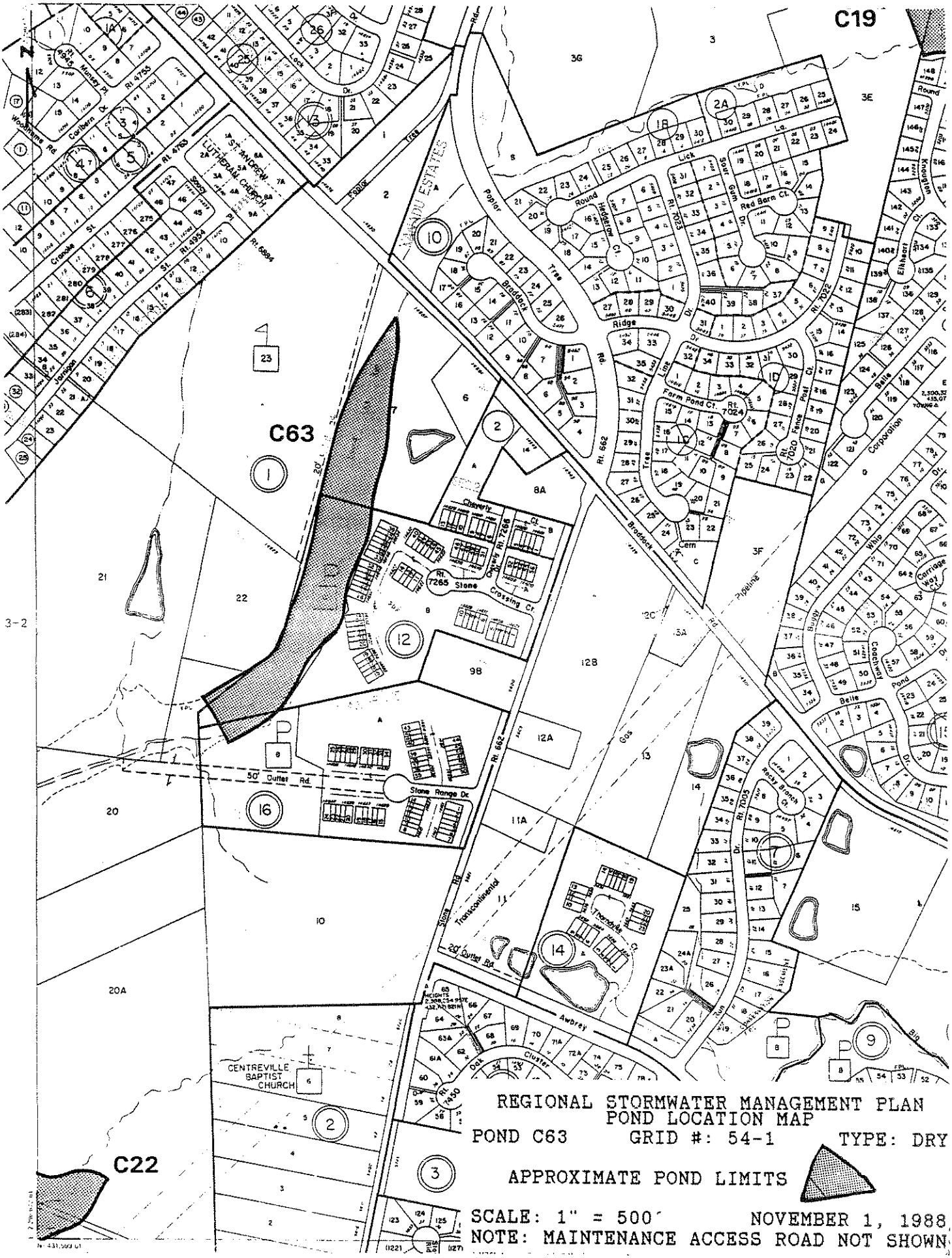
SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND C62 GRID #: 43-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND C63 GRID #: 54-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

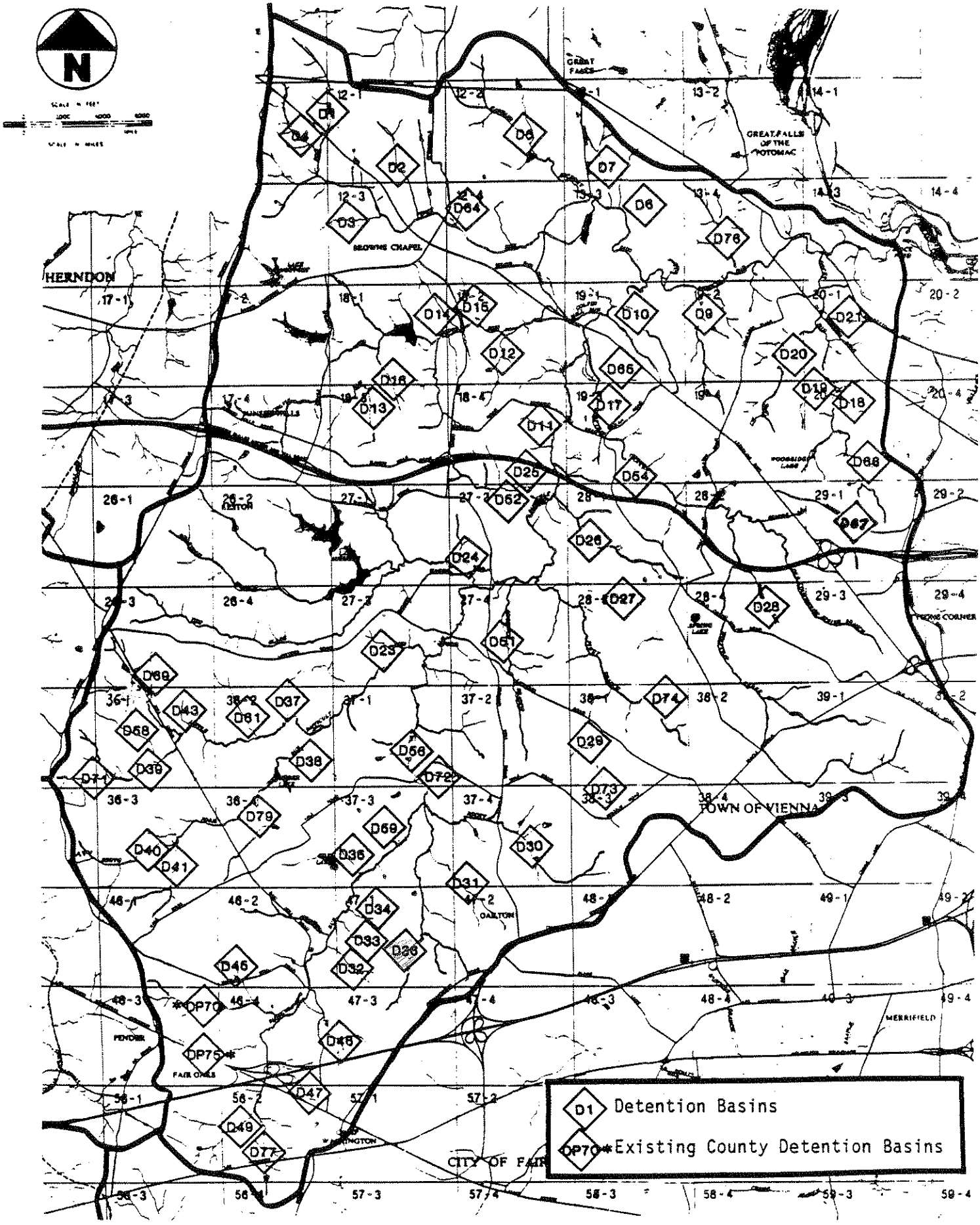
REGIONAL POND LOCATION MAPS

FOR

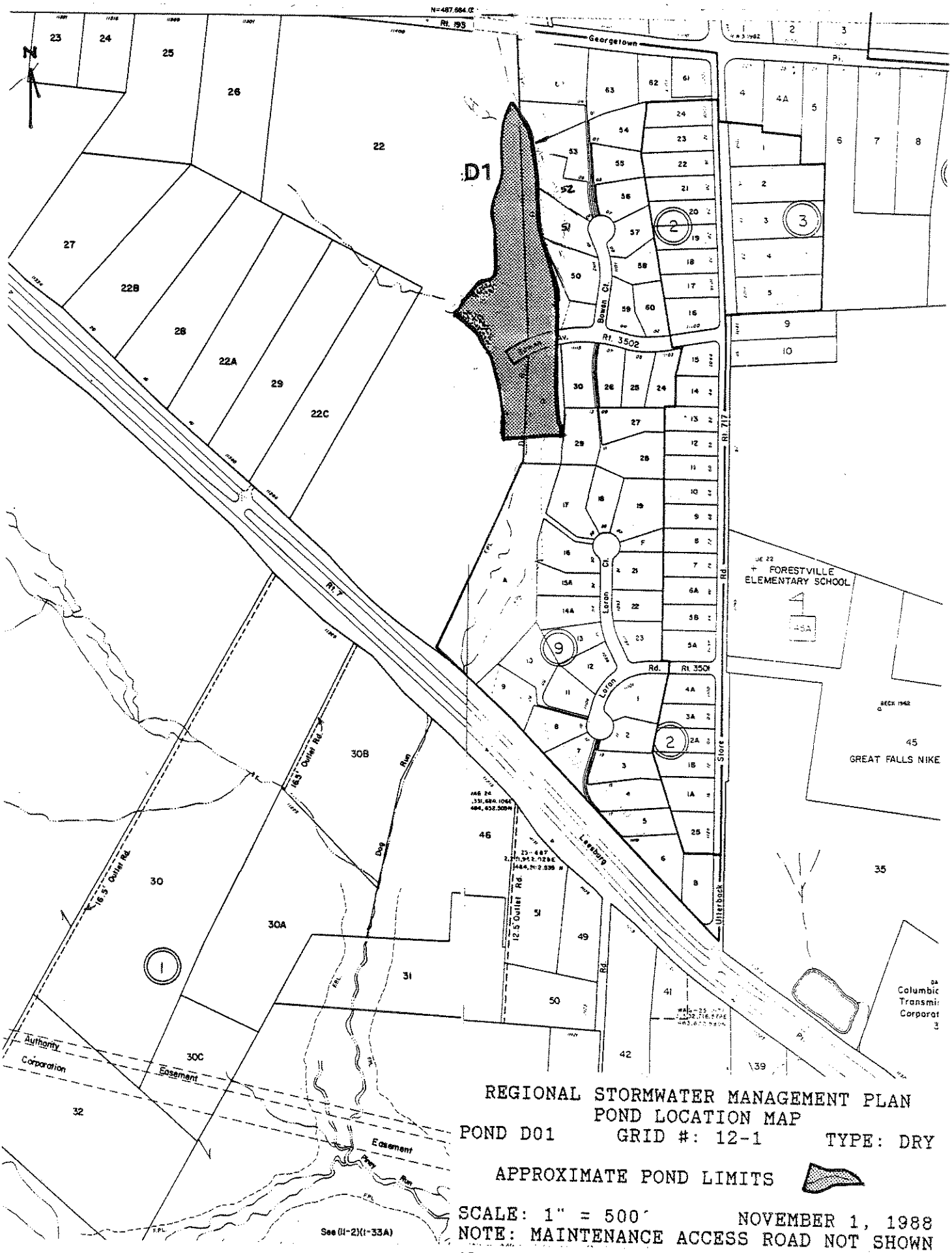
DIFFICULT RUN

- Vicinity Map for Regional Pond Locations . . . . . Page 48

- Individual Regional Pond Location Maps . . . . . Page 49 - 111



Difficult Run: Vicinity Map for Regional Pond Locations



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D01 GRID #: 12-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D02 GRID #: 12-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D03 GRID #: 12-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

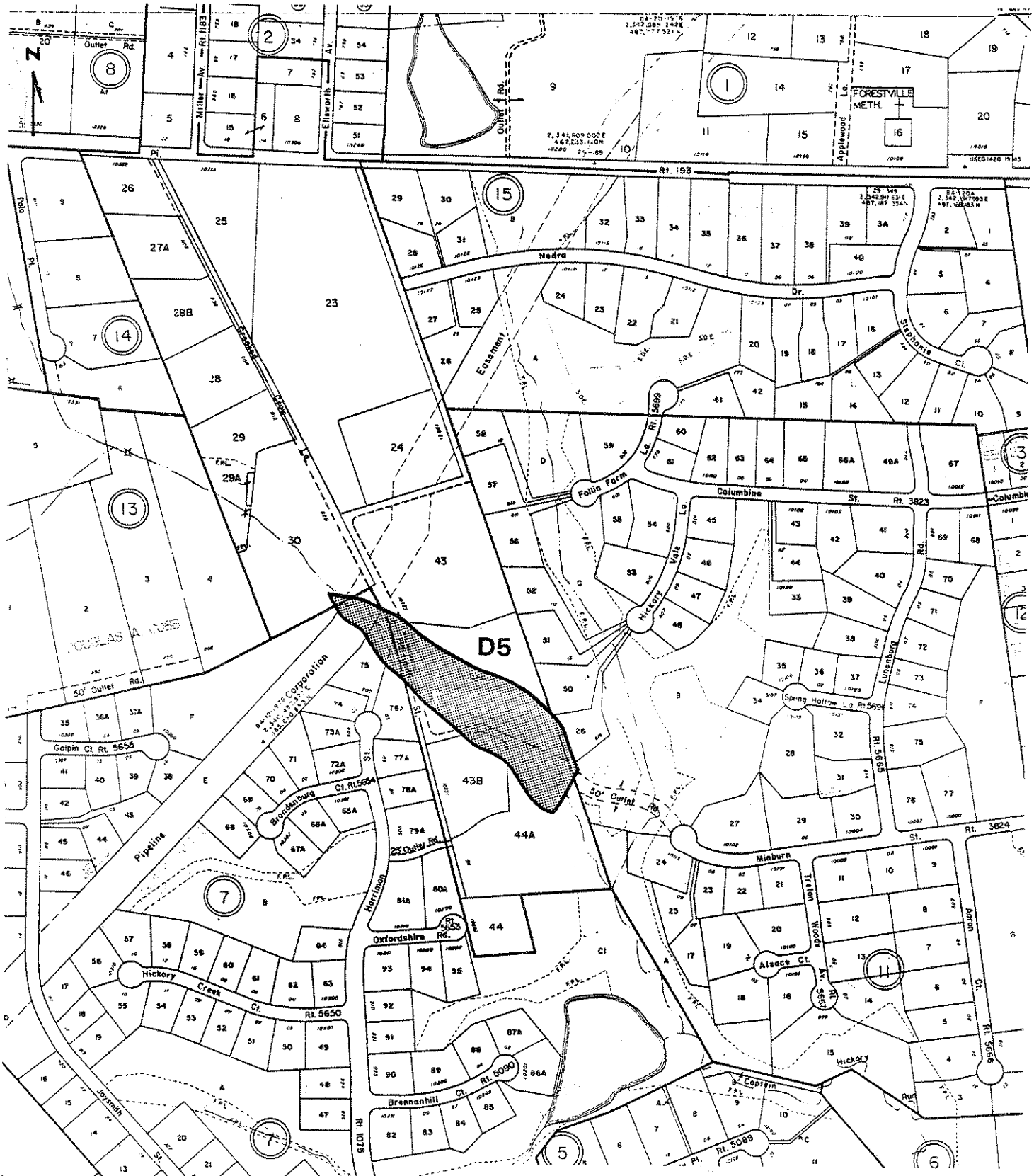
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D04 GRID #: 11-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



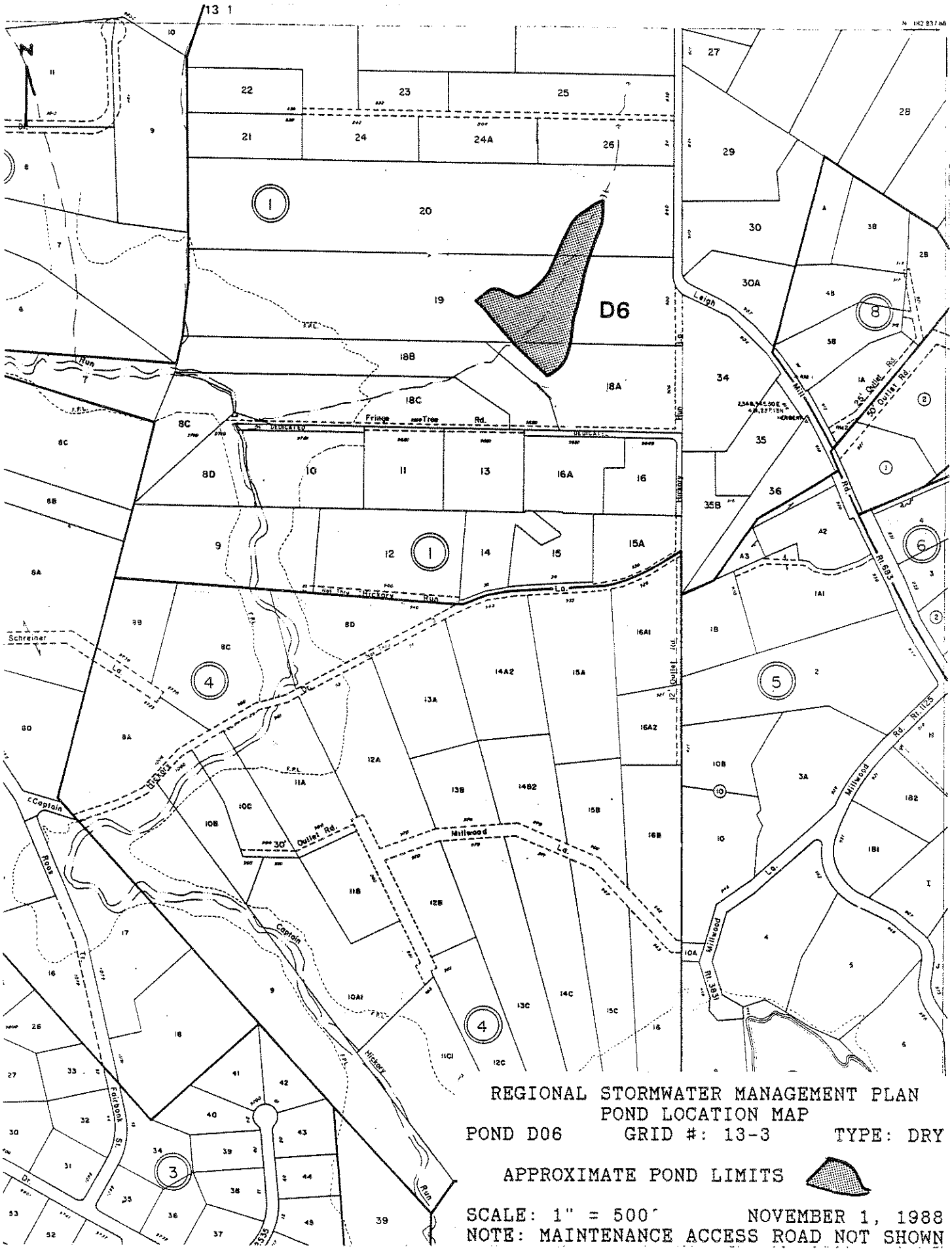
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D05 GRID #: 12-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN.



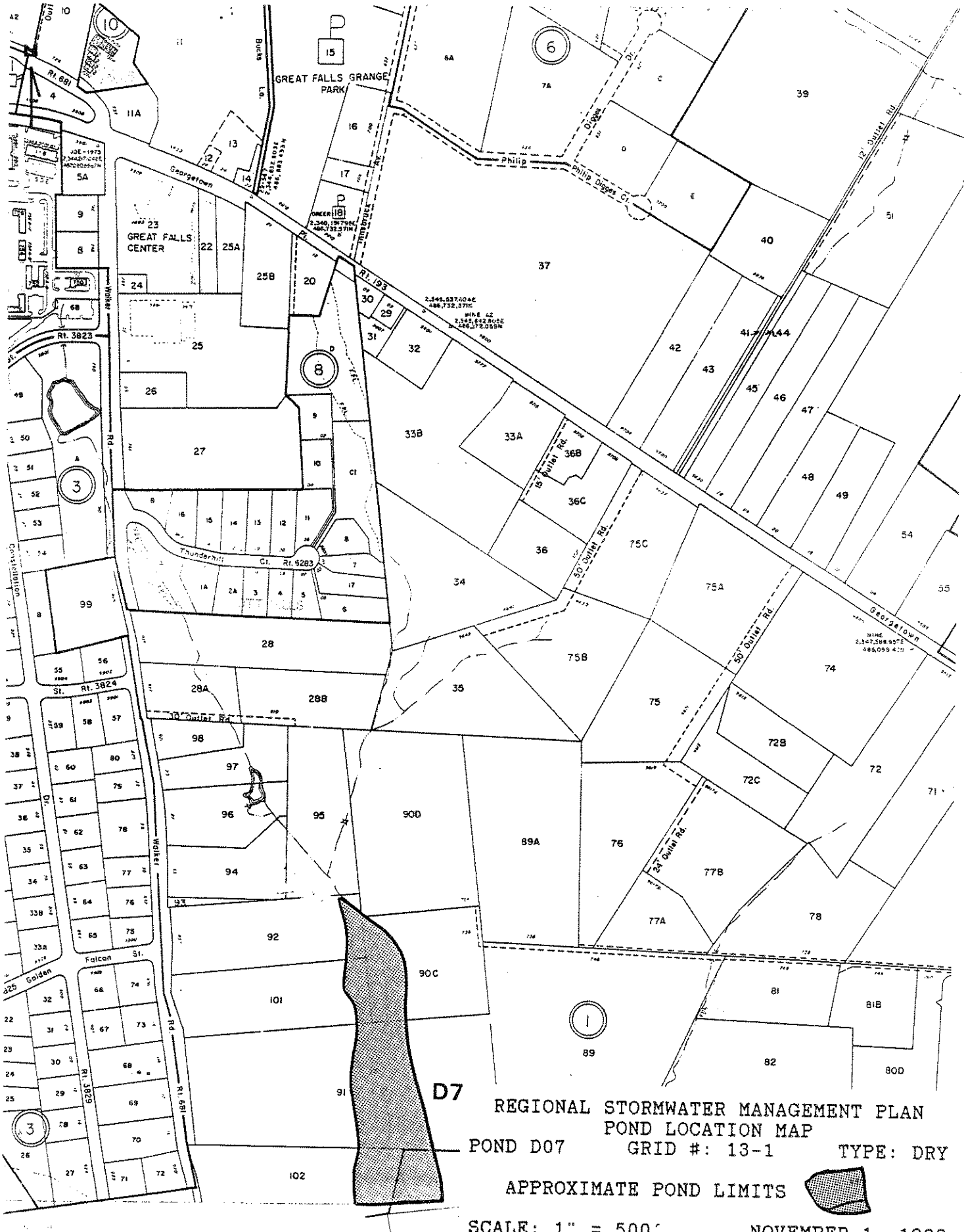
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D06 GRID #: 13-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D07 GRID #: 13-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D09 GRID #: 19-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

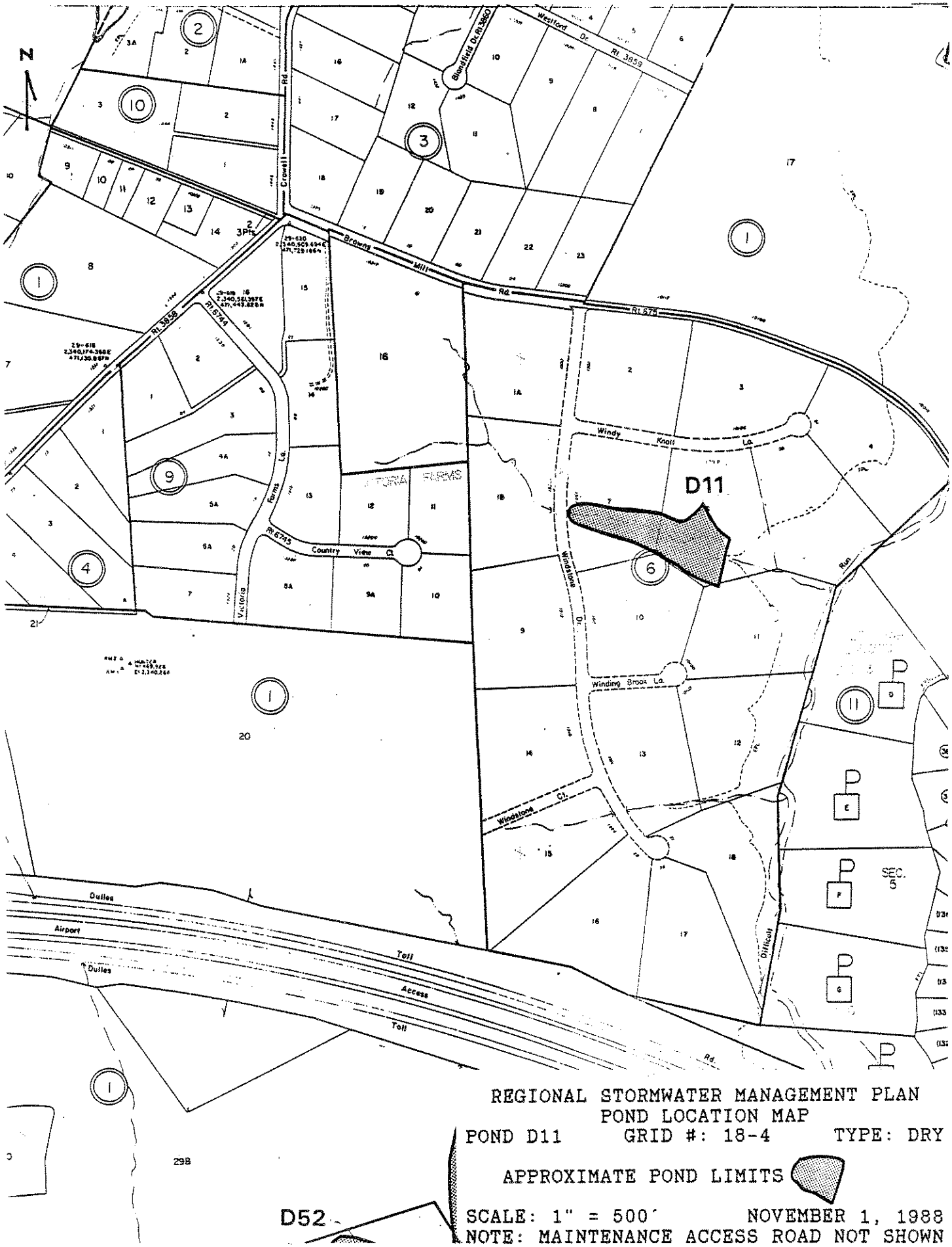
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D10 GRID #: 19-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D11 GRID #: 18-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

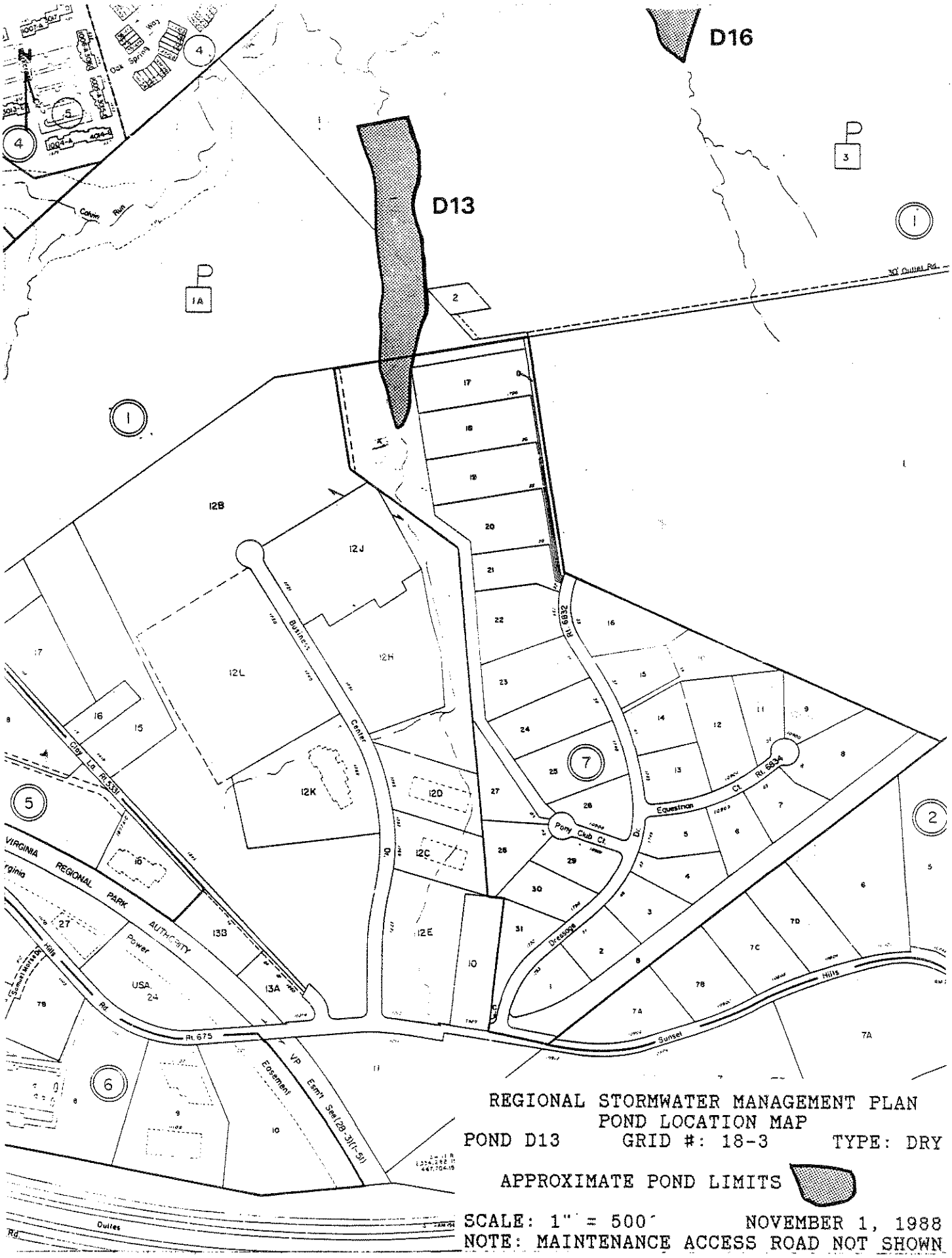
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D12 GRID #: 18-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D13 GRID #: 18-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D14 GRID #: 18-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

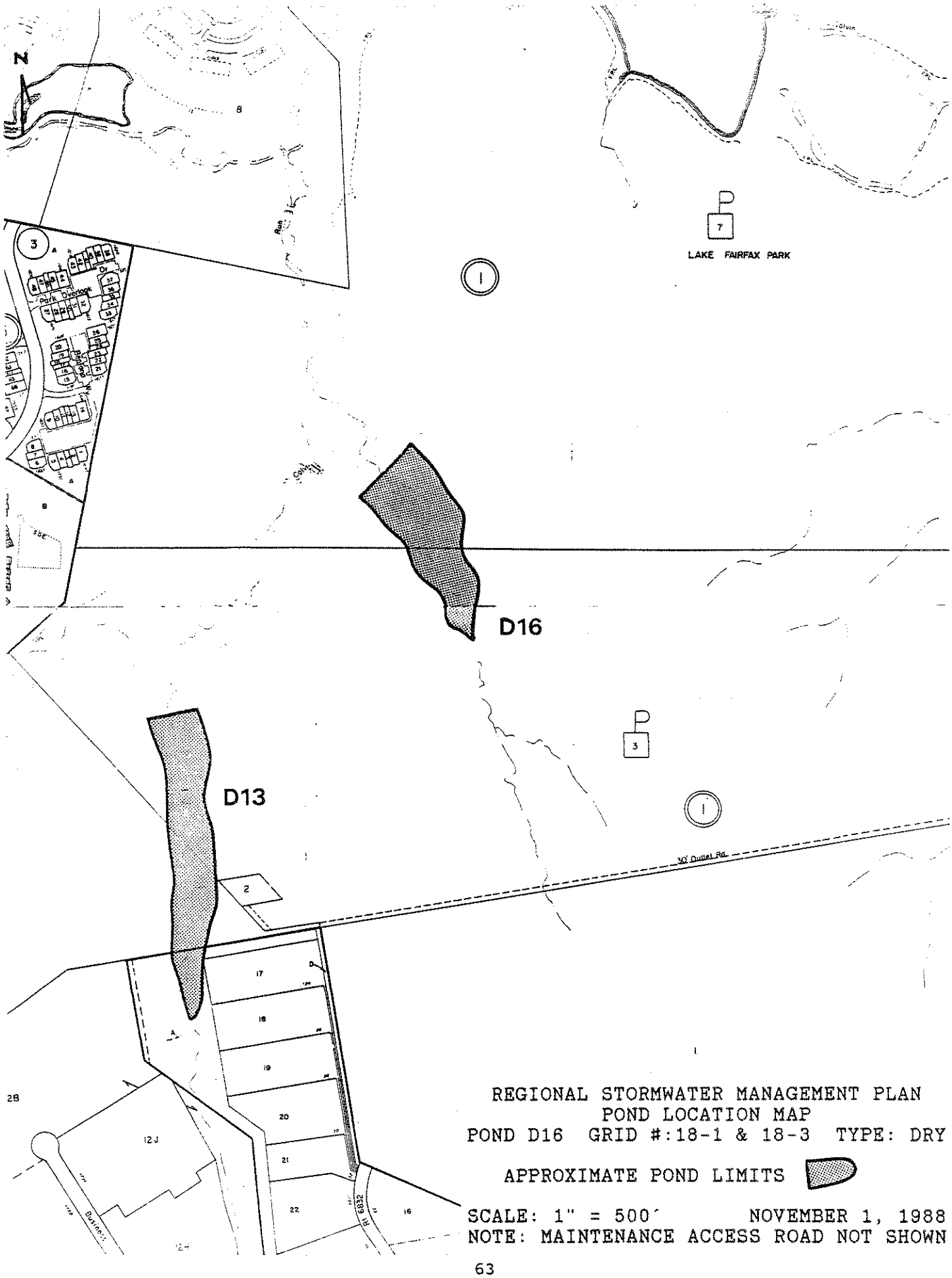
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D15 GRID #: 18-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D16 GRID #:18-1 & 18-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D17 GRID #: 19-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D18 GRID #: 20-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

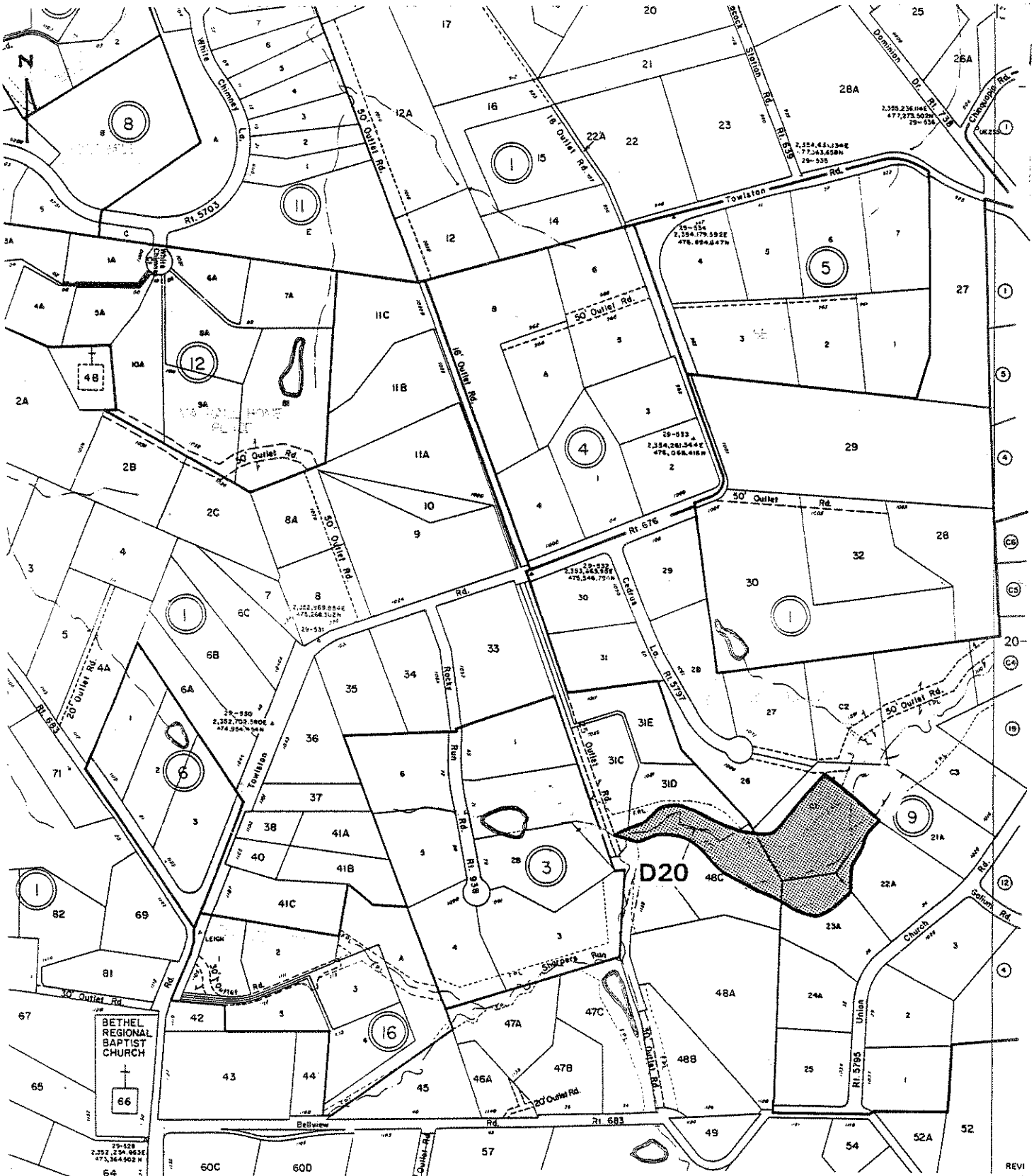
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D19 GRID #: 20-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D20 GRID #: 19-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

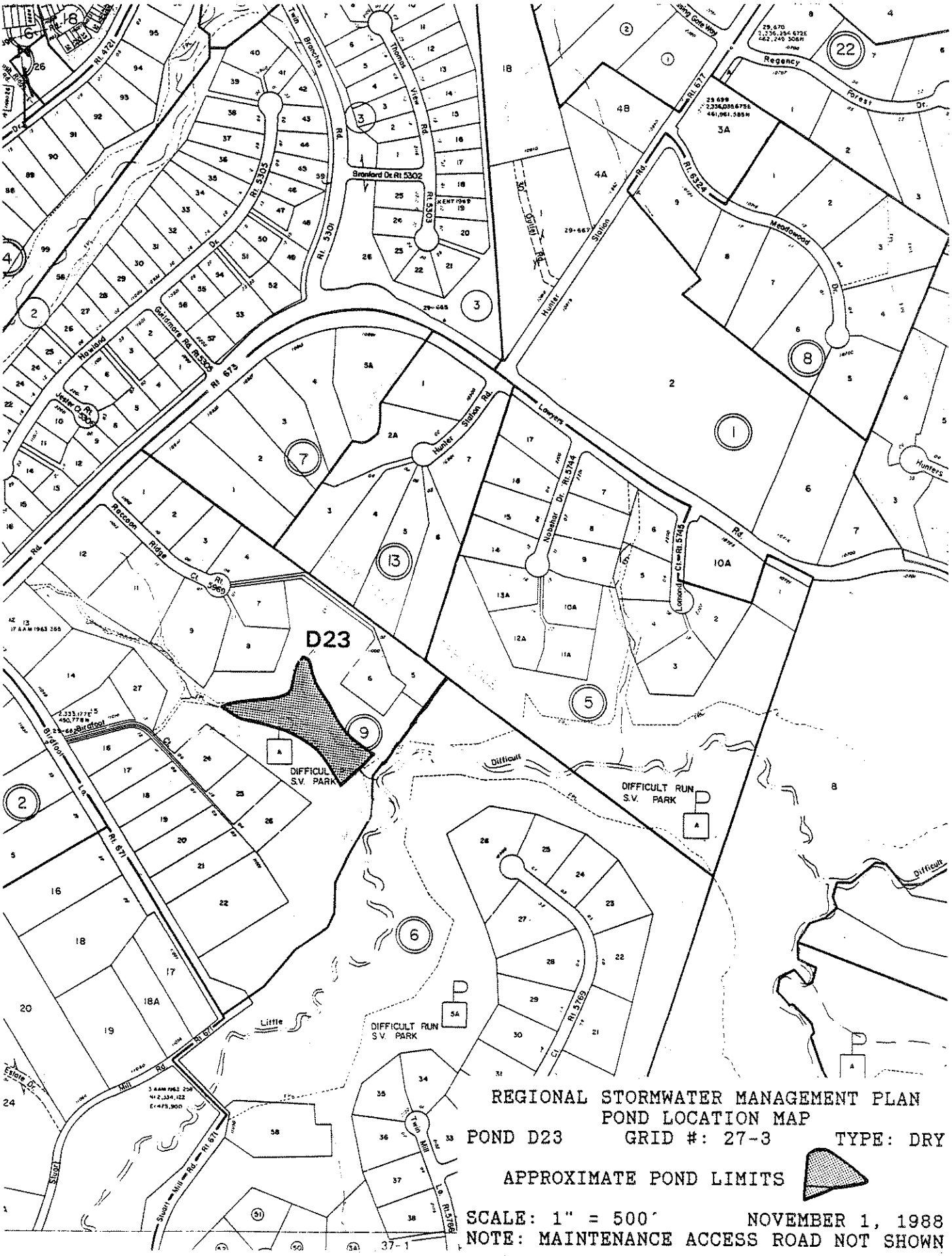
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D21 GRID #: 20-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D23 GRID #: 27-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

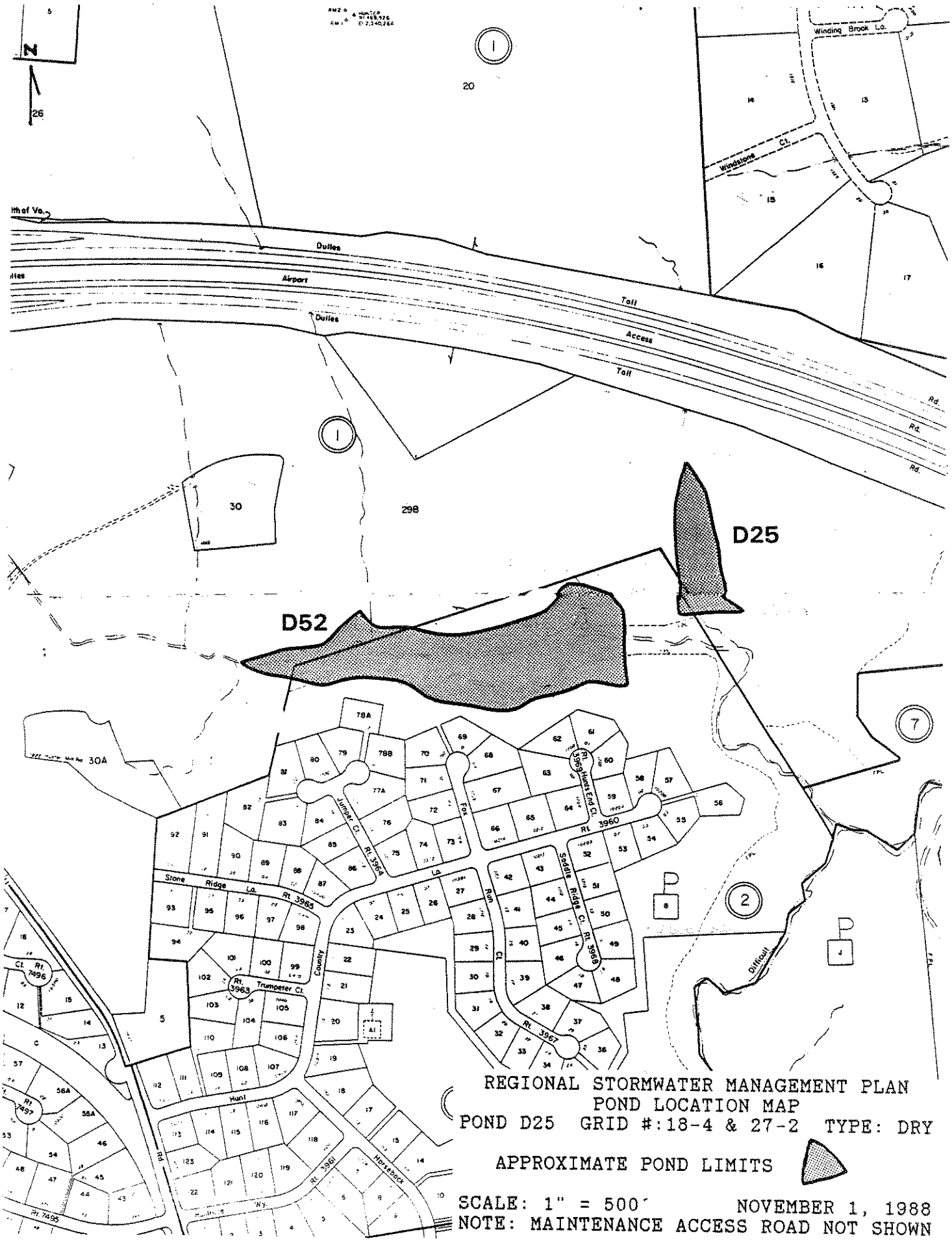
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D24 GRID #: 27-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

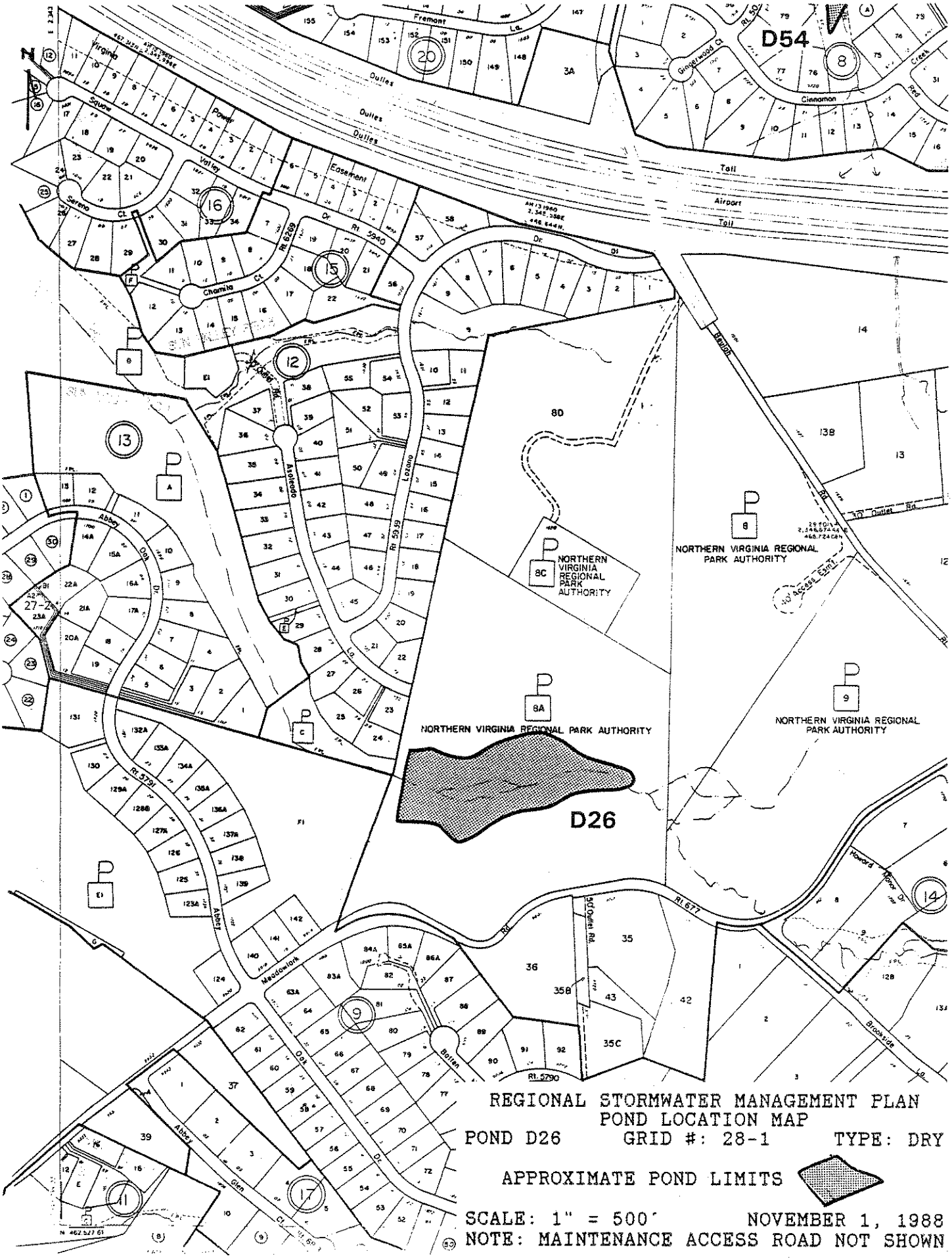
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D25 GRID #:18-4 & 27-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D26 GRID #: 28-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D27 GRID #: 28-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D28 GRID #: 28-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

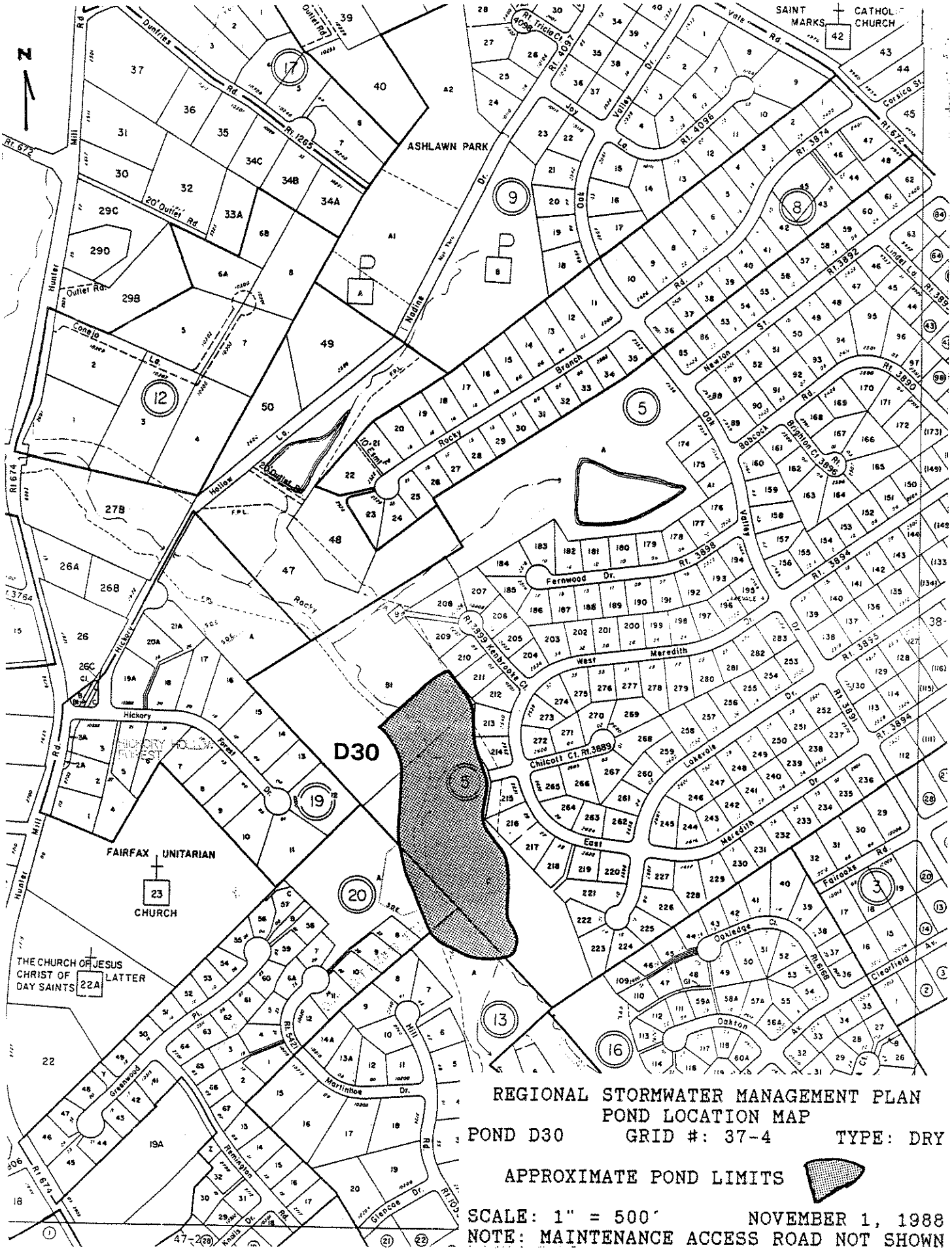
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D29 GRID #: 38-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



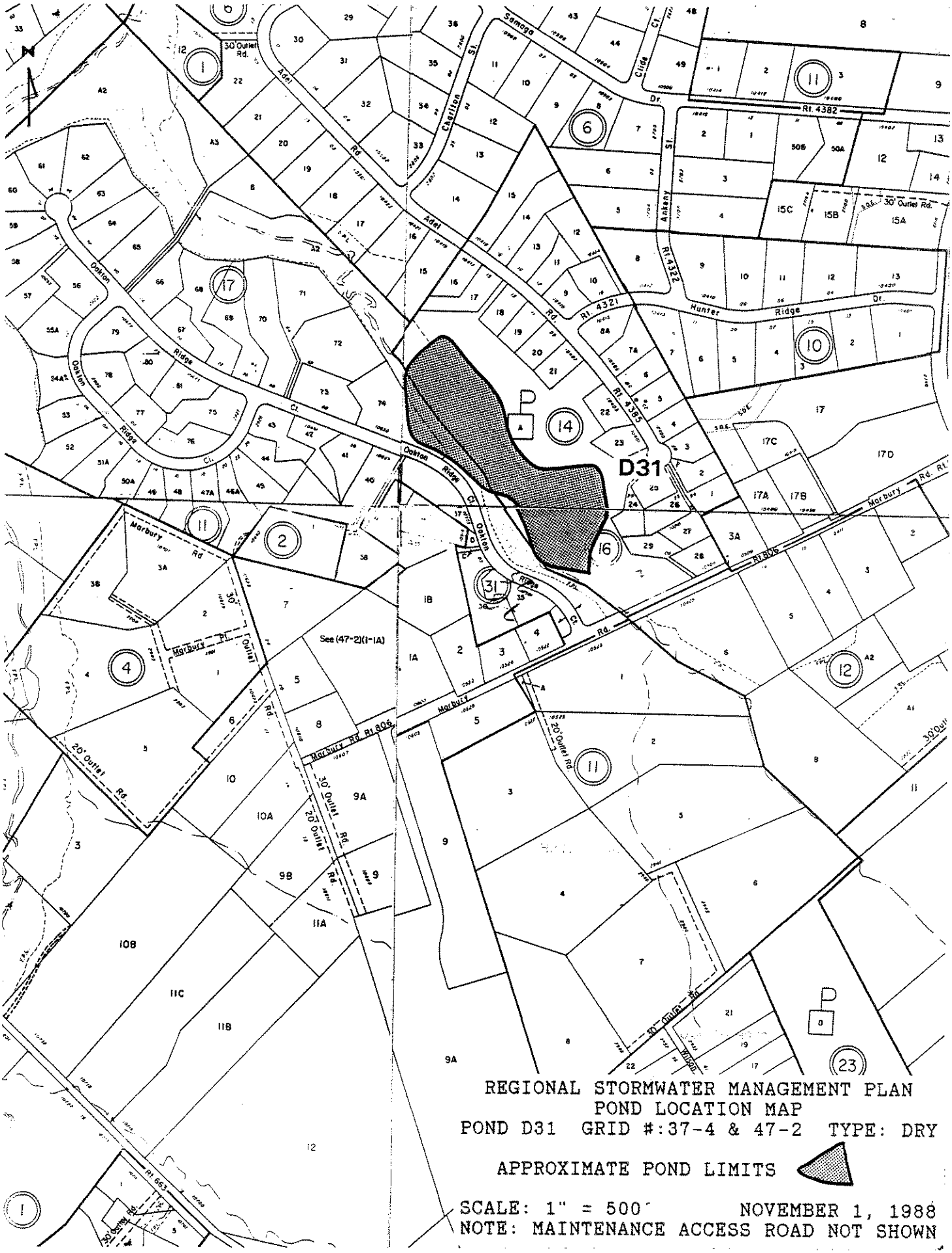
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D30 GRID #: 37-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

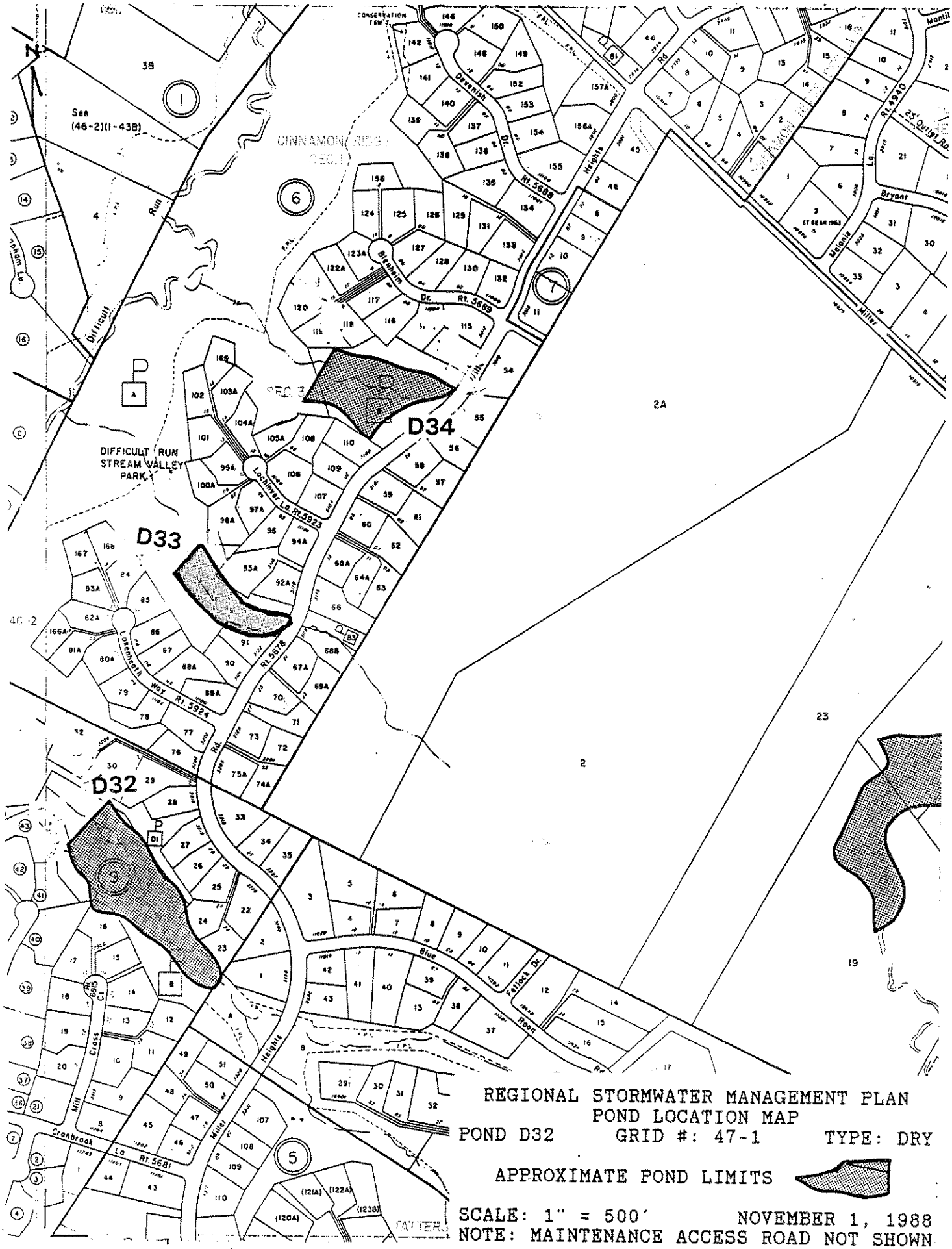
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D31 GRID #:37-4 & 47-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D32 GRID #: 47-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D33 GRID #: 47-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

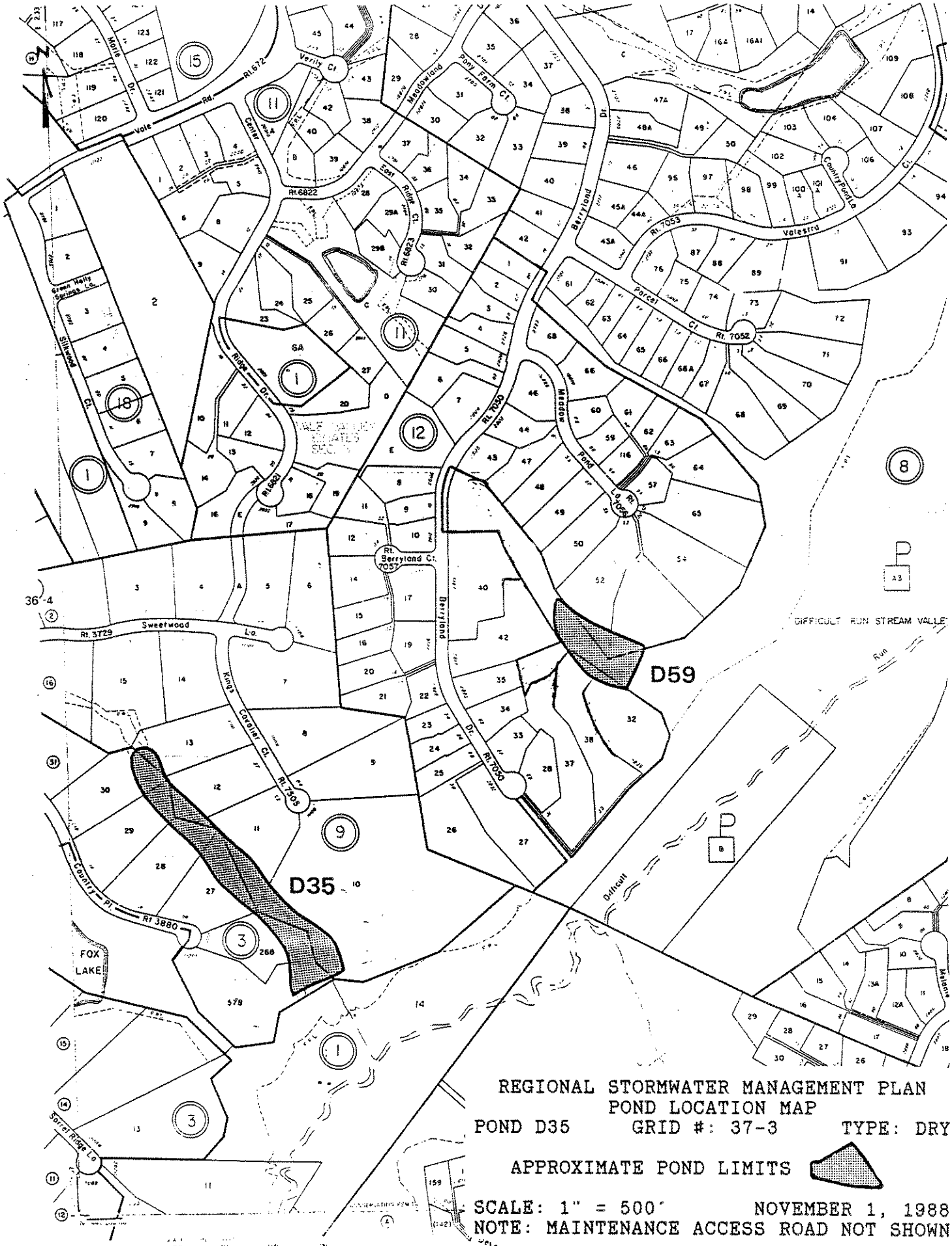
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D34 GRID #: 47-1 TYPE: DR

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



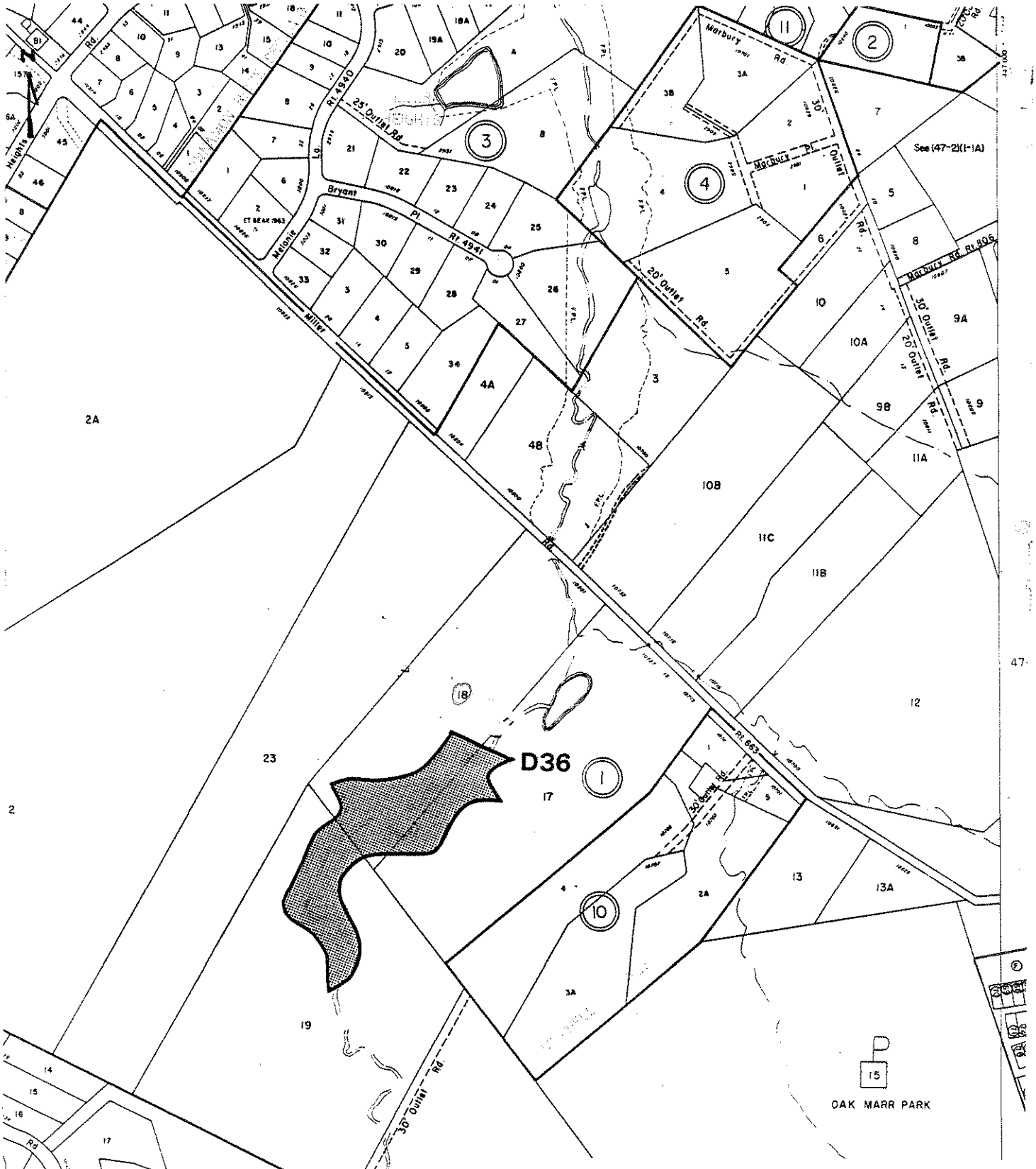
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D35 GRID #: 37-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D36 GRID #: 47-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

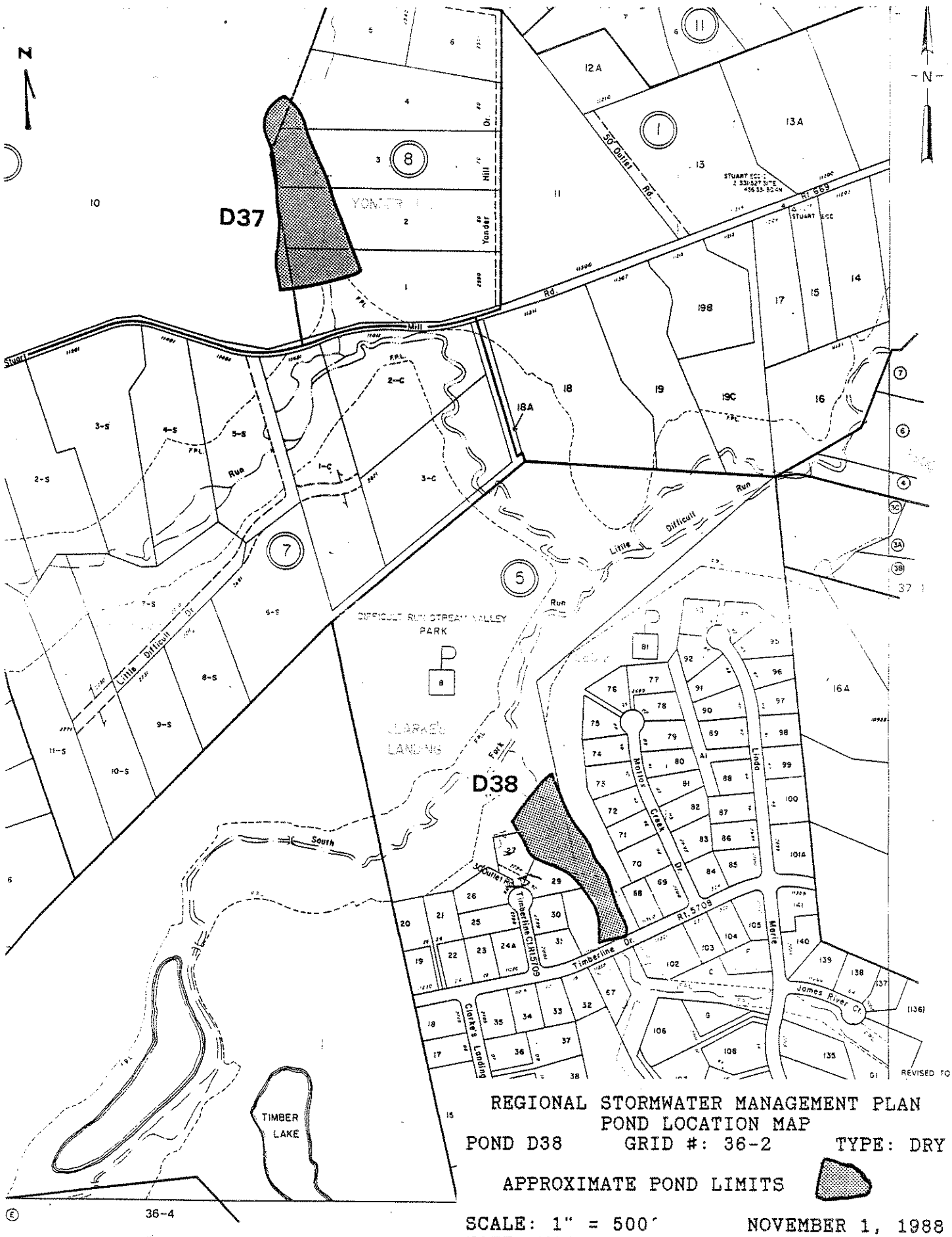
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D37 GRID #: 36-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



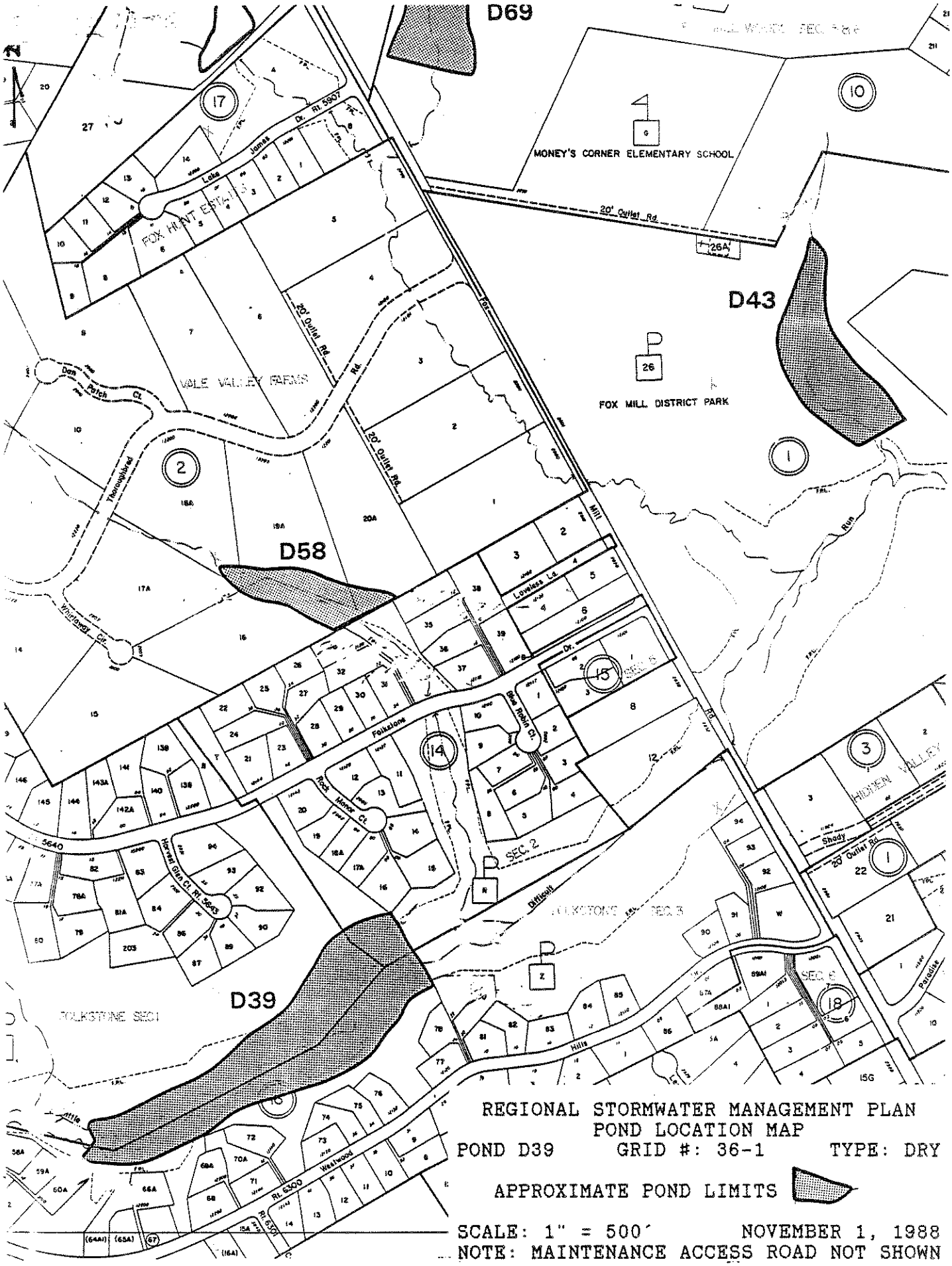
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D38 GRID #: 36-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D39 GRID #: 36-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

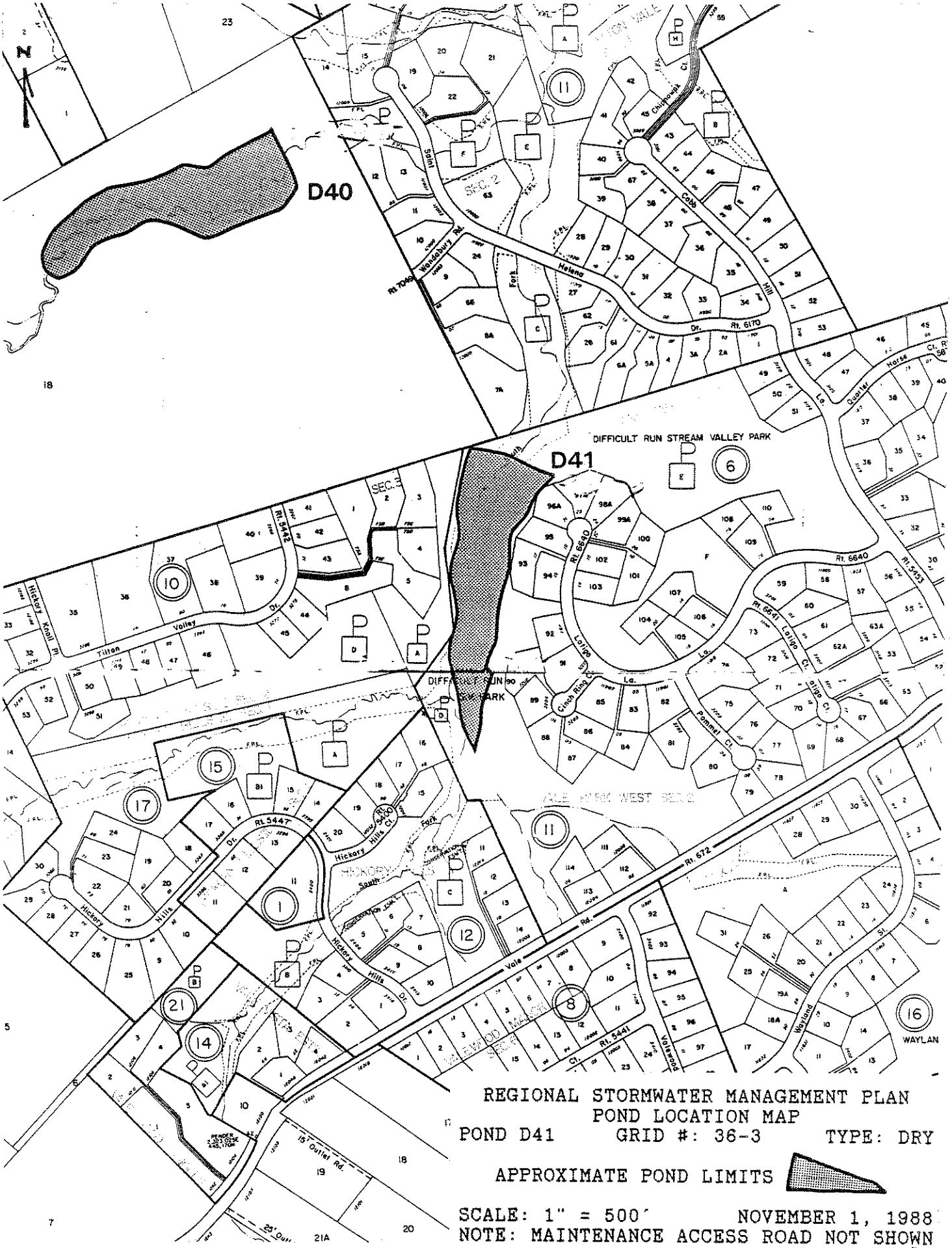
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D40 GRID #: 36-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN.



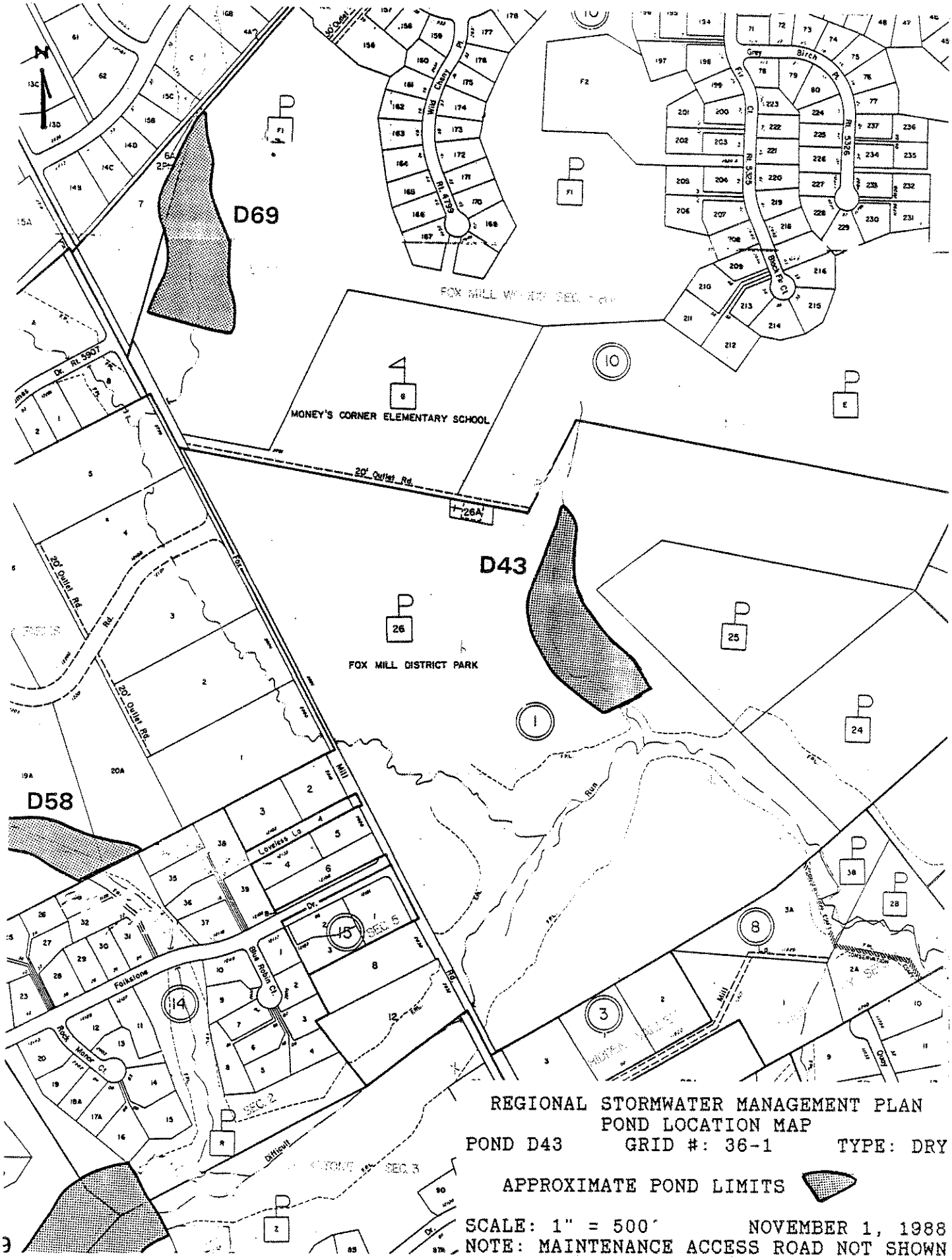
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D41 GRID #: 36-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D43 GRID #: 36-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

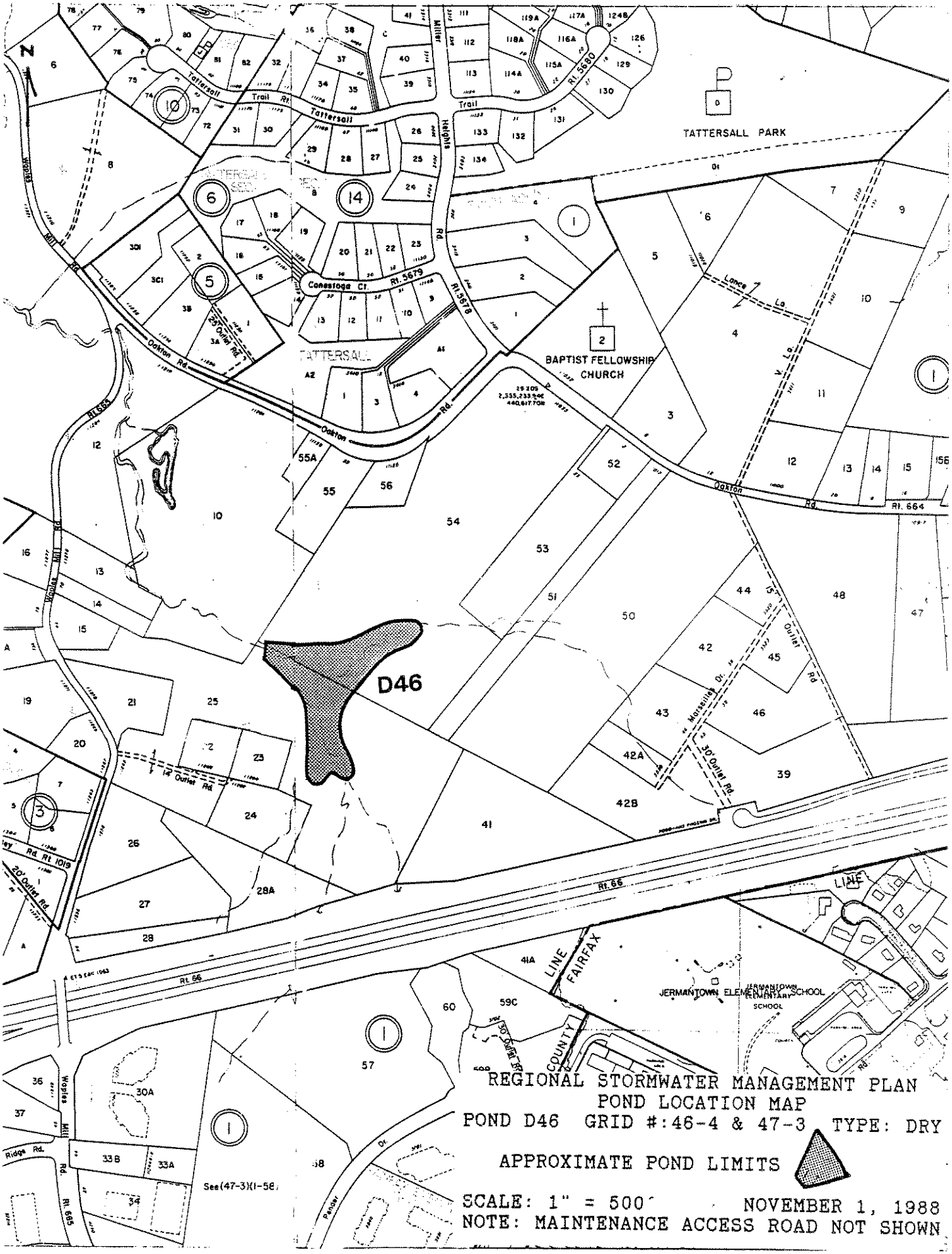
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D45 GRID #: 46-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D46 GRID #:46-4 & 47-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D47 GRID #: 56-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D49 GRID #:56-1 & 56-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

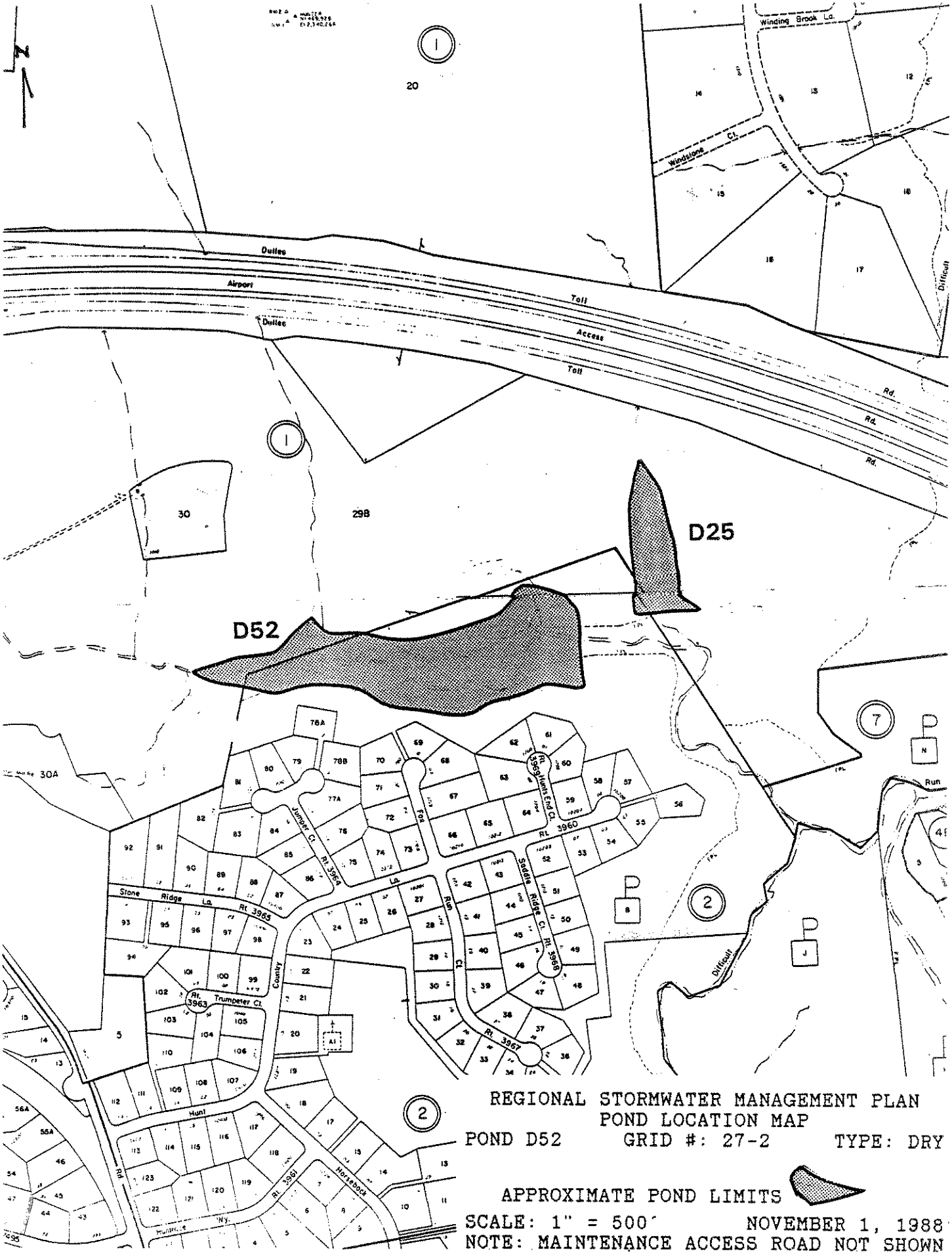
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D51 GRID #: 27-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D52 GRID #: 27-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D54 GRID #: 19-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D56 GRID #: 37-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

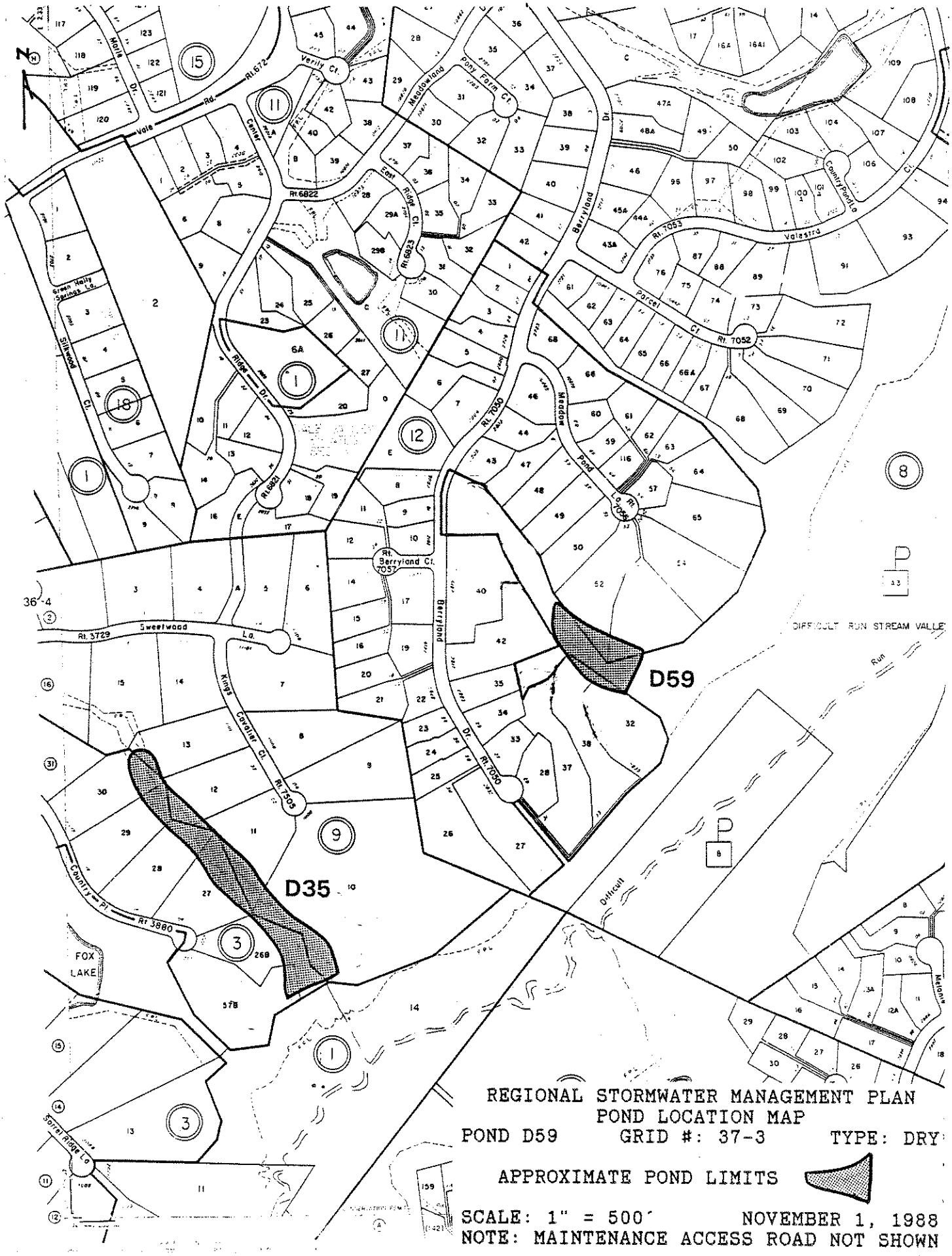
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D58 GRID #: 36-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



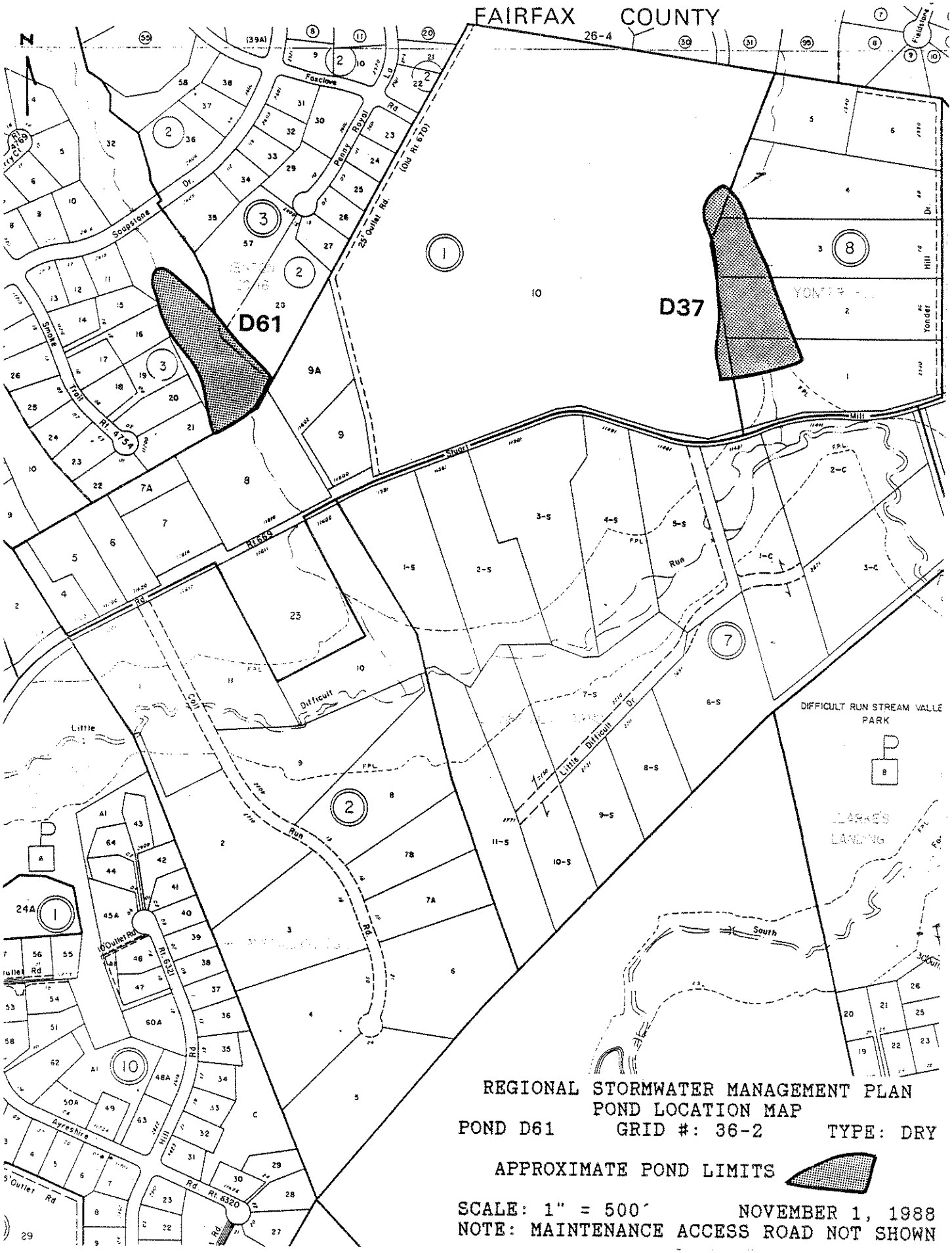
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D59 GRID #: 37-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



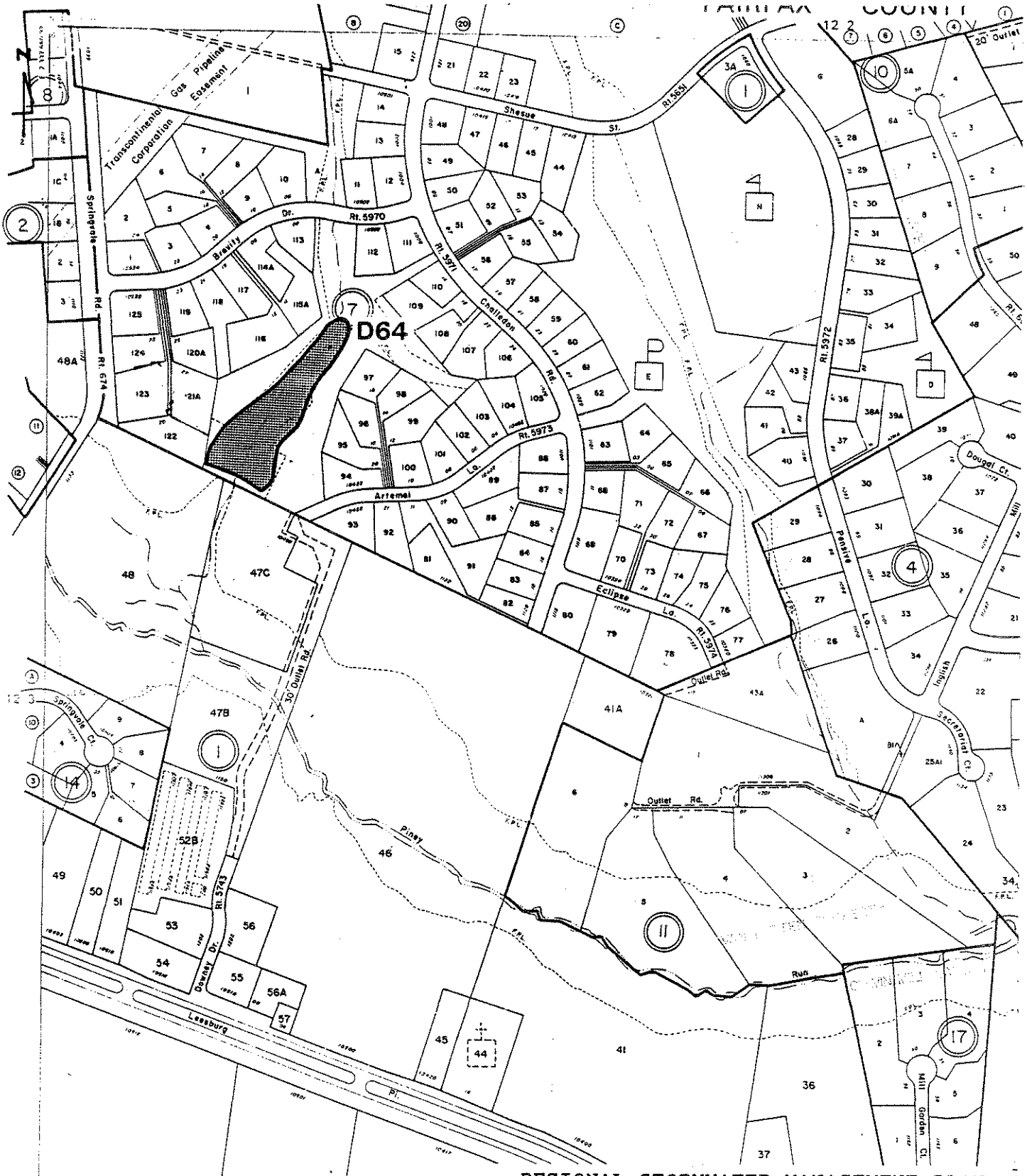
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D61 GRID #: 36-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



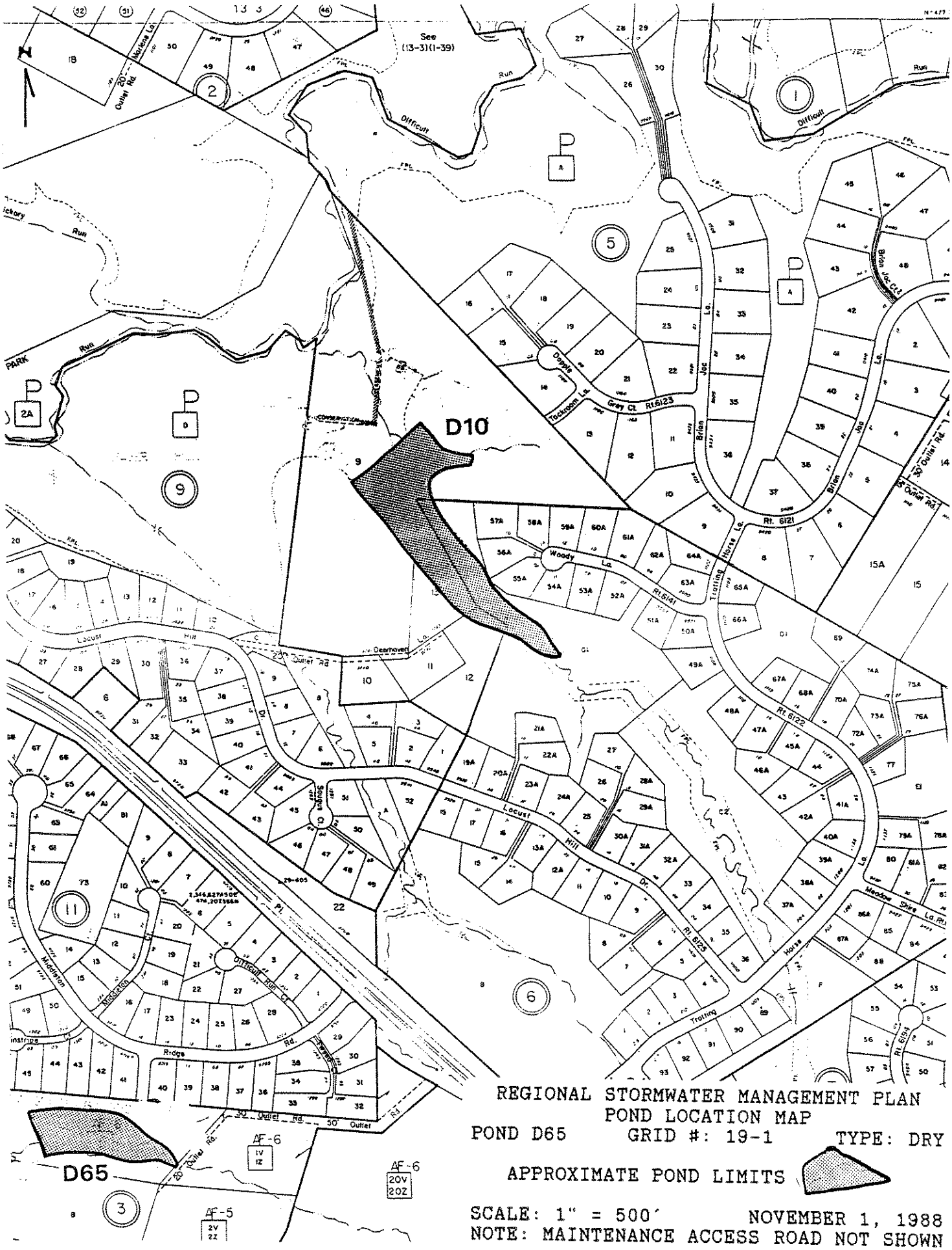
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D64 GRID #: 12-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D65 GRID #: 19-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D66 GRID #: 20-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN.

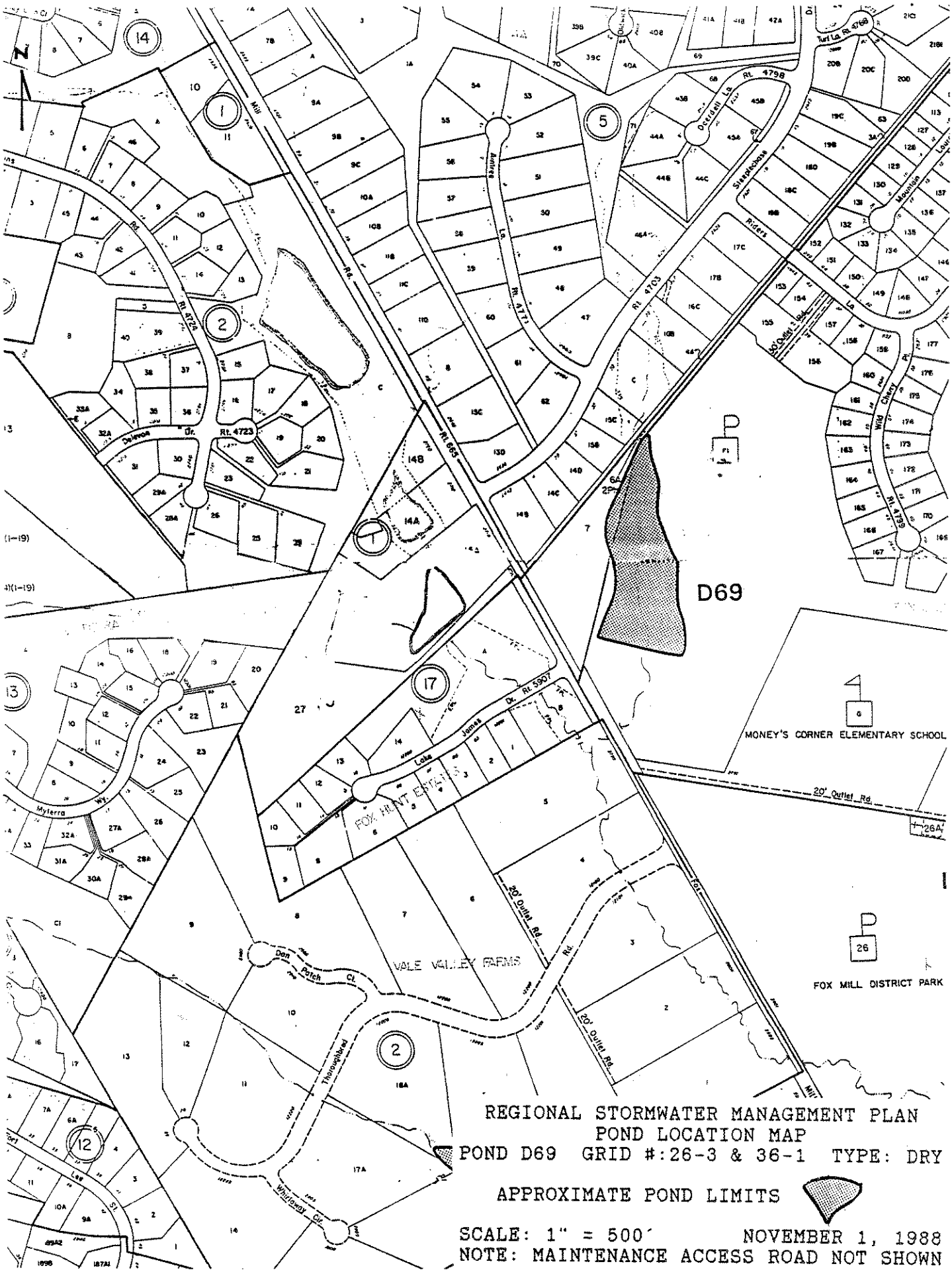
POND LOCATION MAP

POND D67 GRID #: 29-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND D69 GRID #:26-3 & 36-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D71 GRID #: 35-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

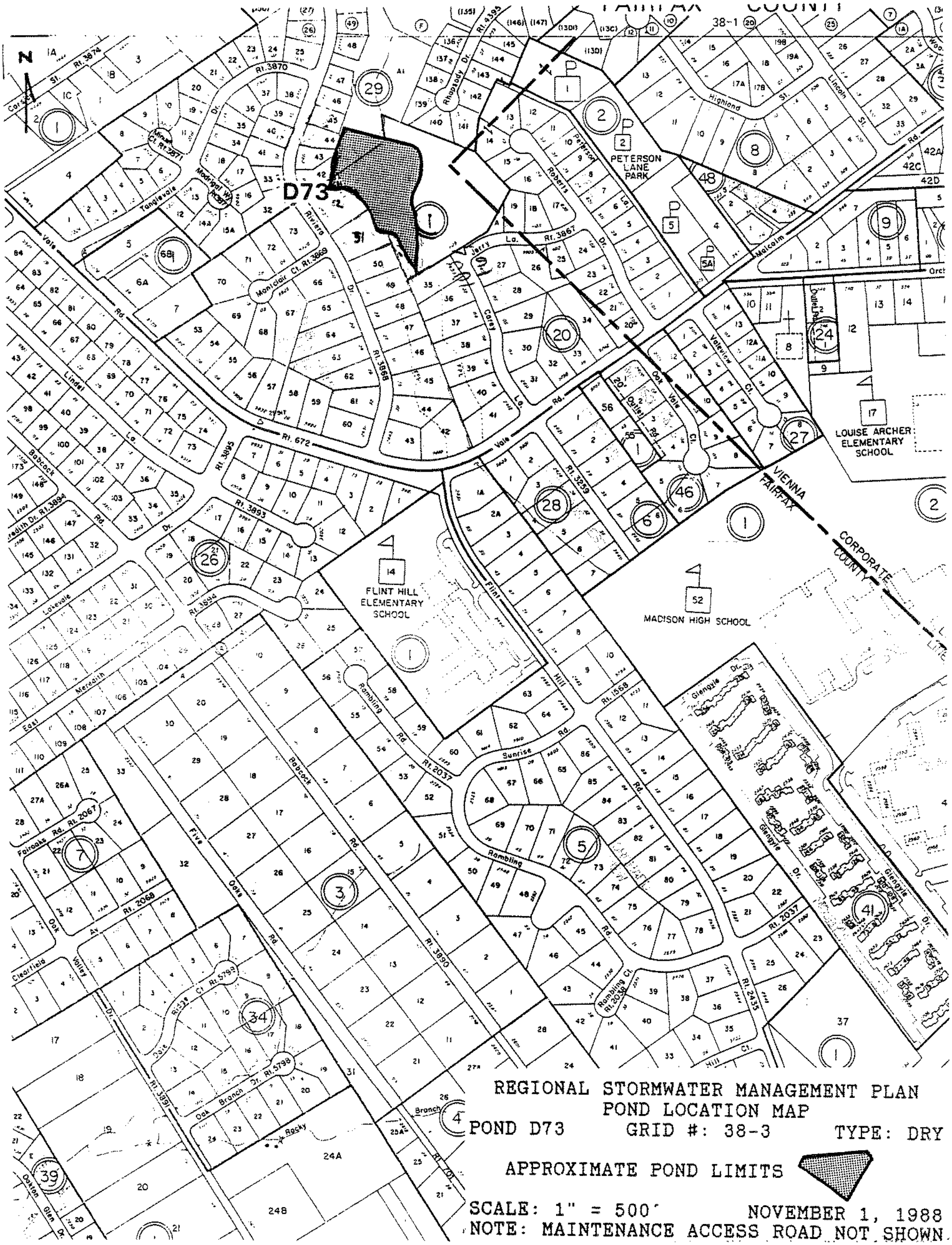
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D72 GRID #: 37-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



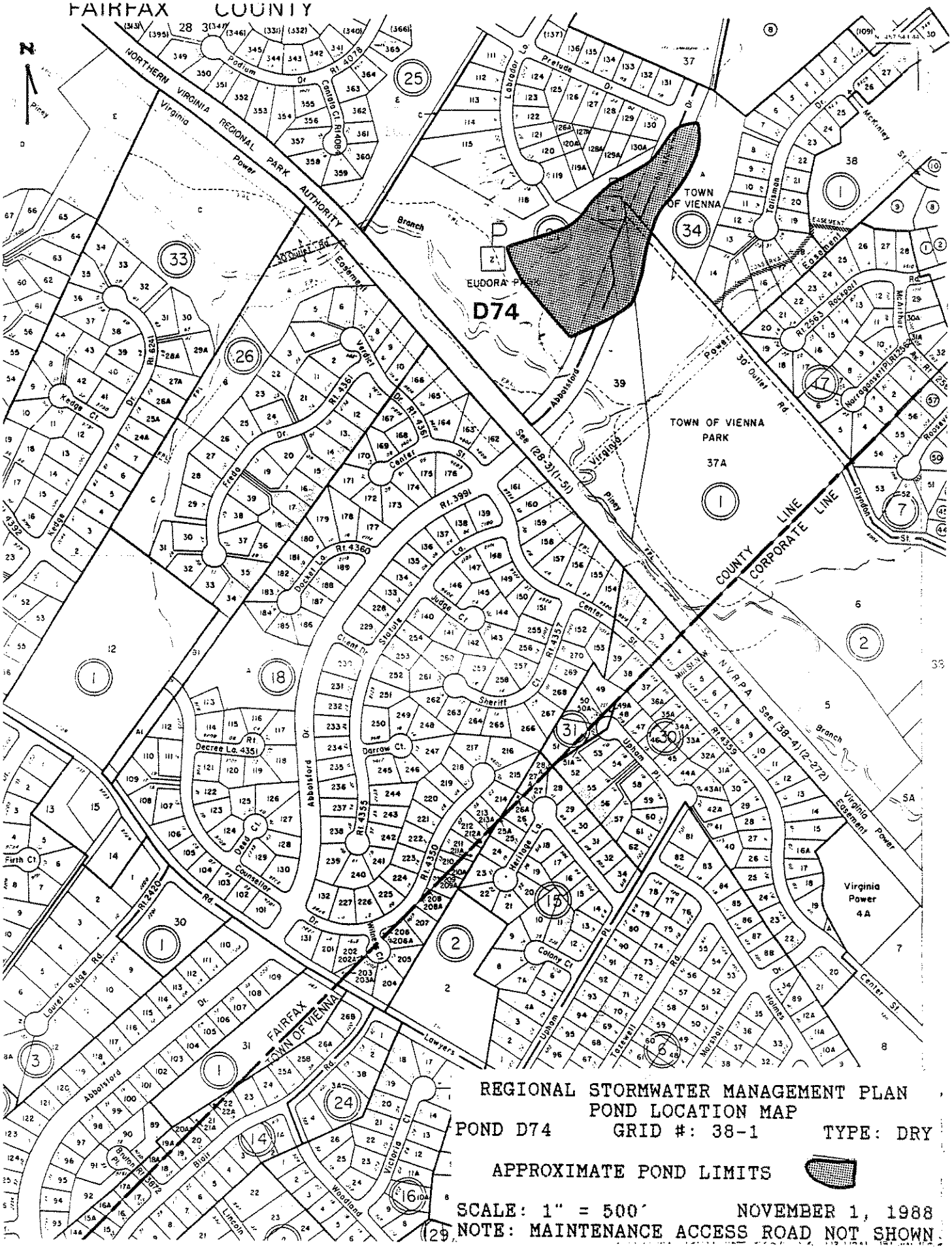
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D73 GRID #: 38-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



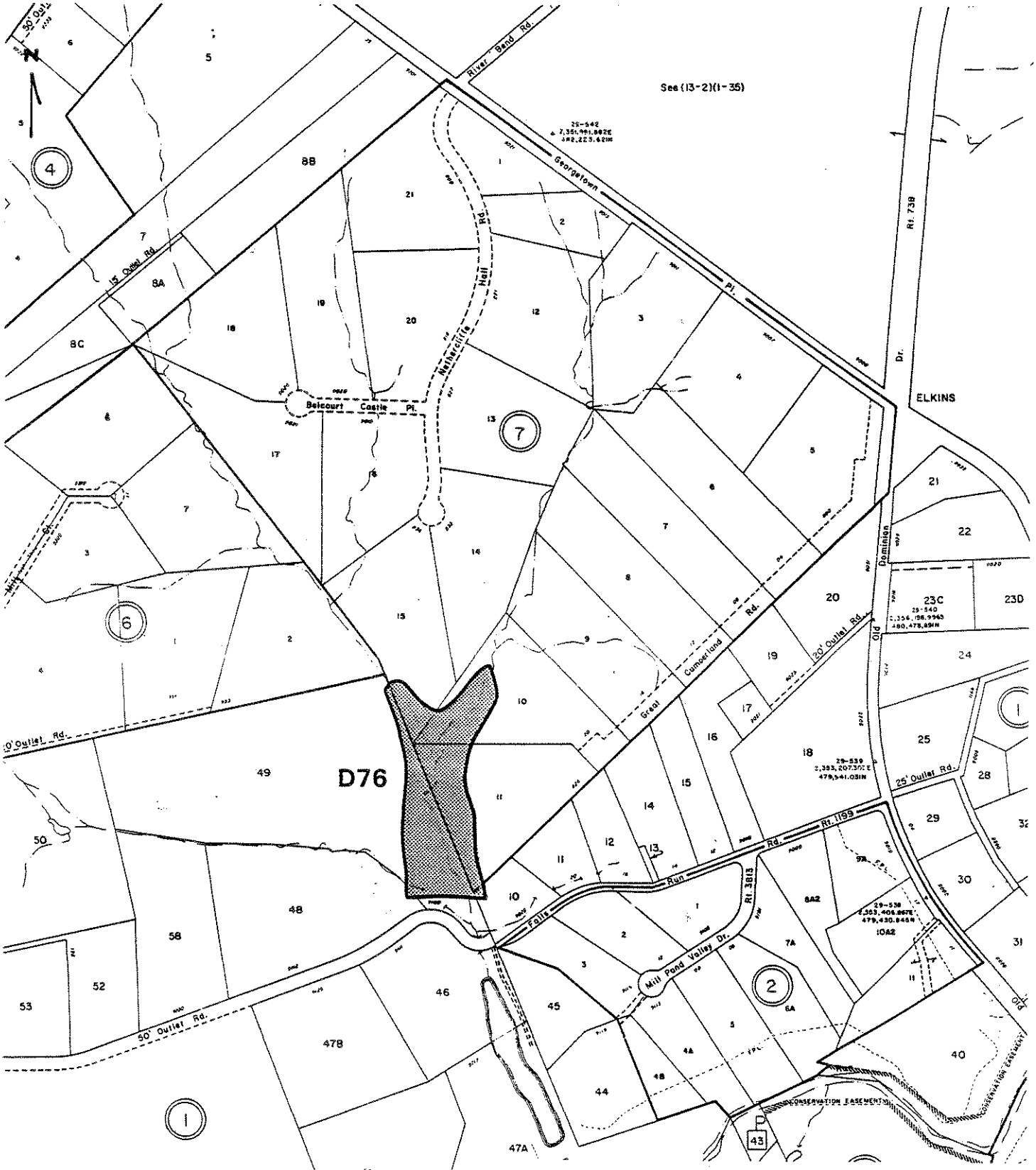
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D74 GRID #: 38-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN.



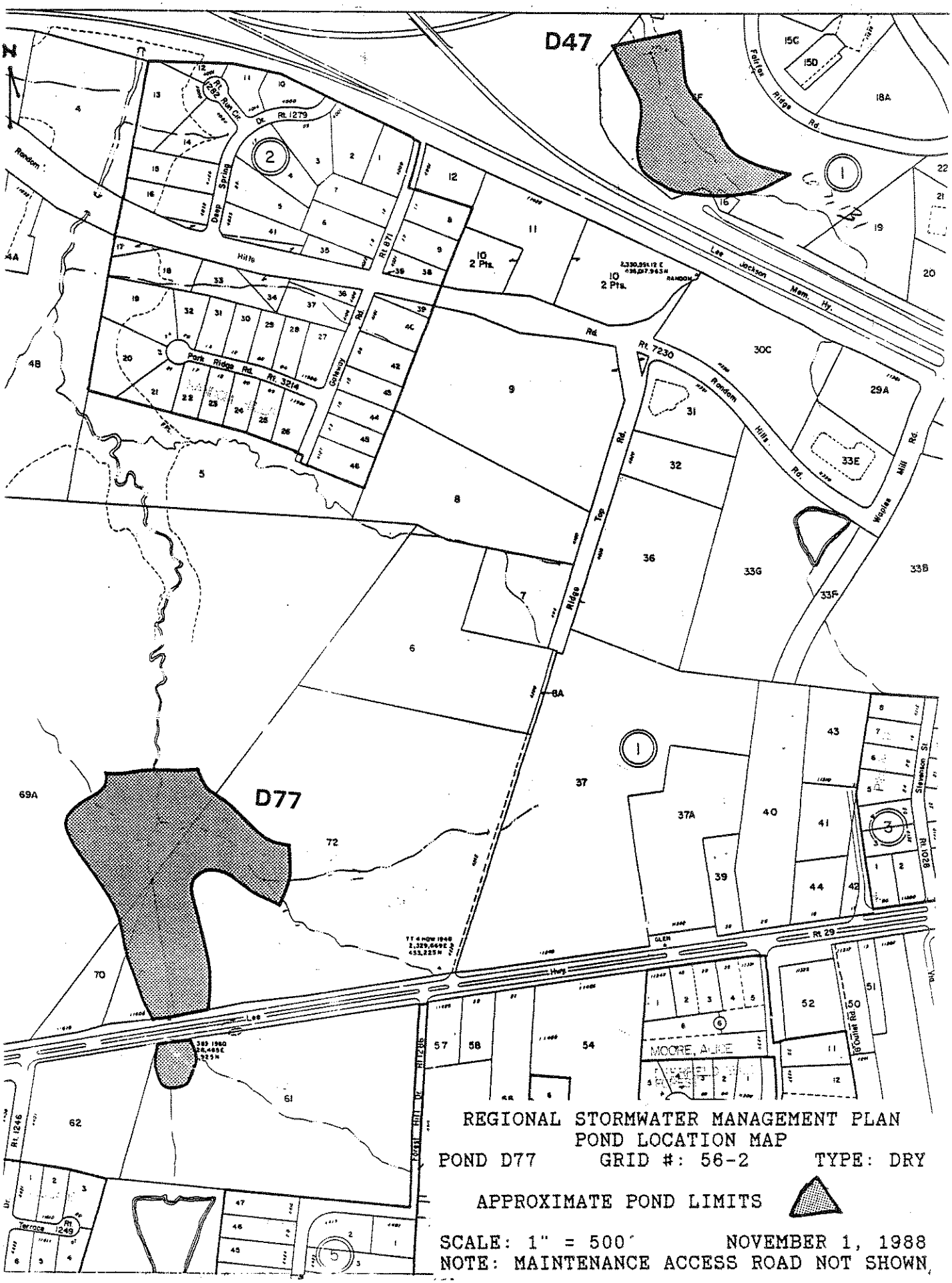
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D76 GRID #: 13-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D77 GRID #: 56-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND D79 GRID #: 36-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

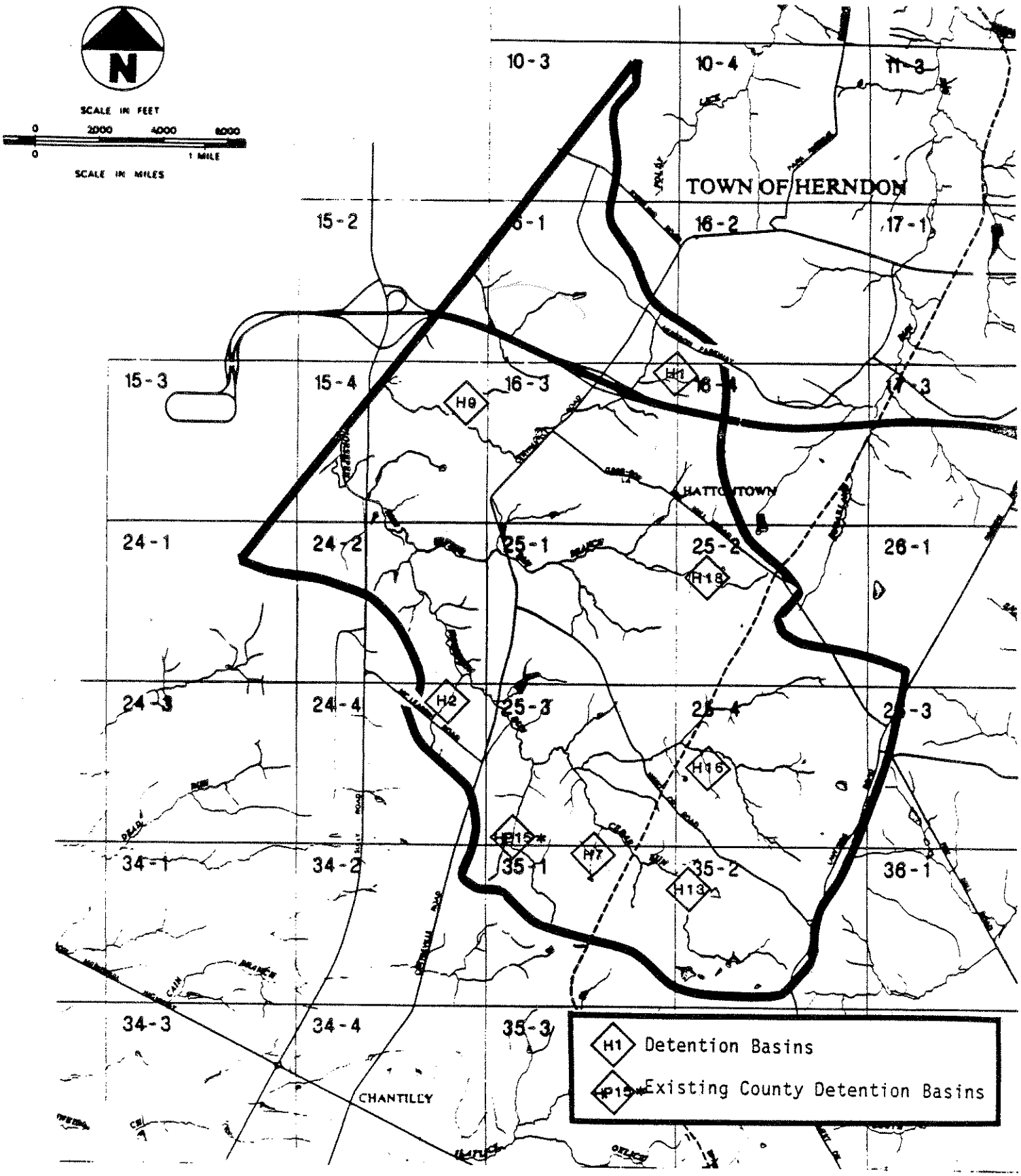
REGIONAL POND LOCATION MAPS

FOR

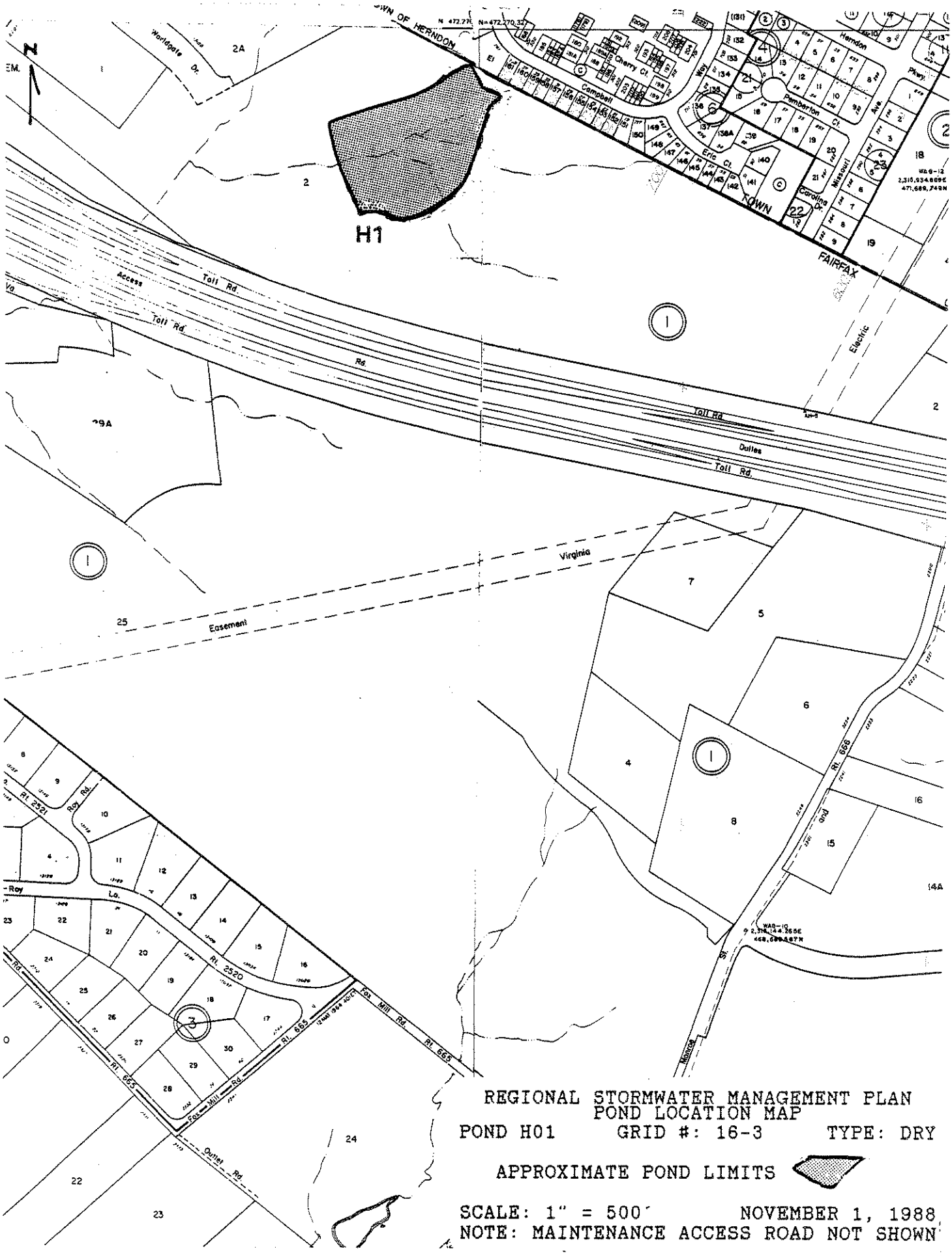
HORSEPEN CREEK

- Vicinity Map for Regional Pond Locations . . . . . Page 113

- Individual Regional Pond Location Maps . . . . . Page 114 - 120



Horsepen Creek: Vicinity Map for Regional Pond Locations



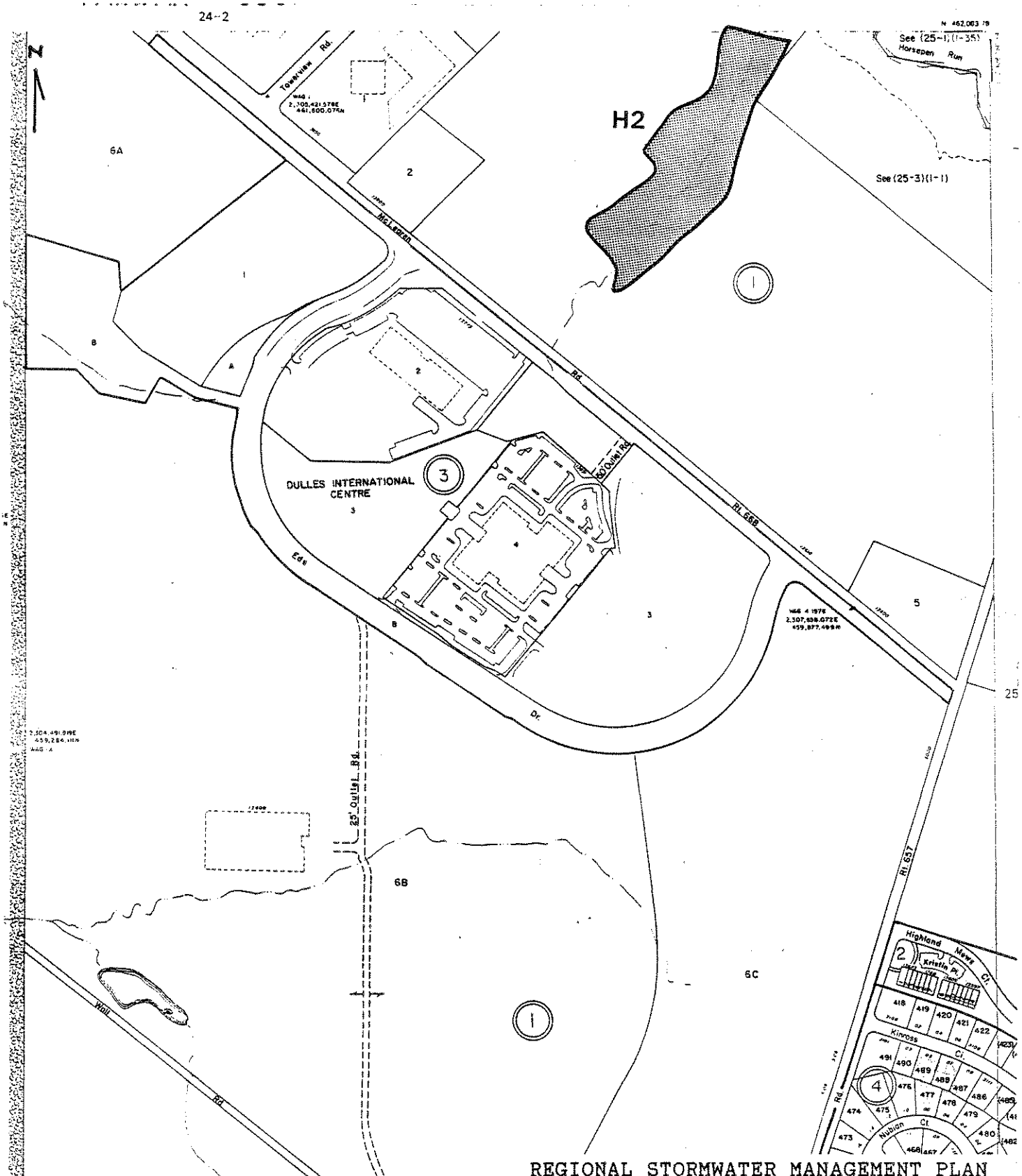
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H01 GRID #: 16-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H02 GRID #: 24-4 TYPE: DRY

APPROXIMATE POND LIMITS

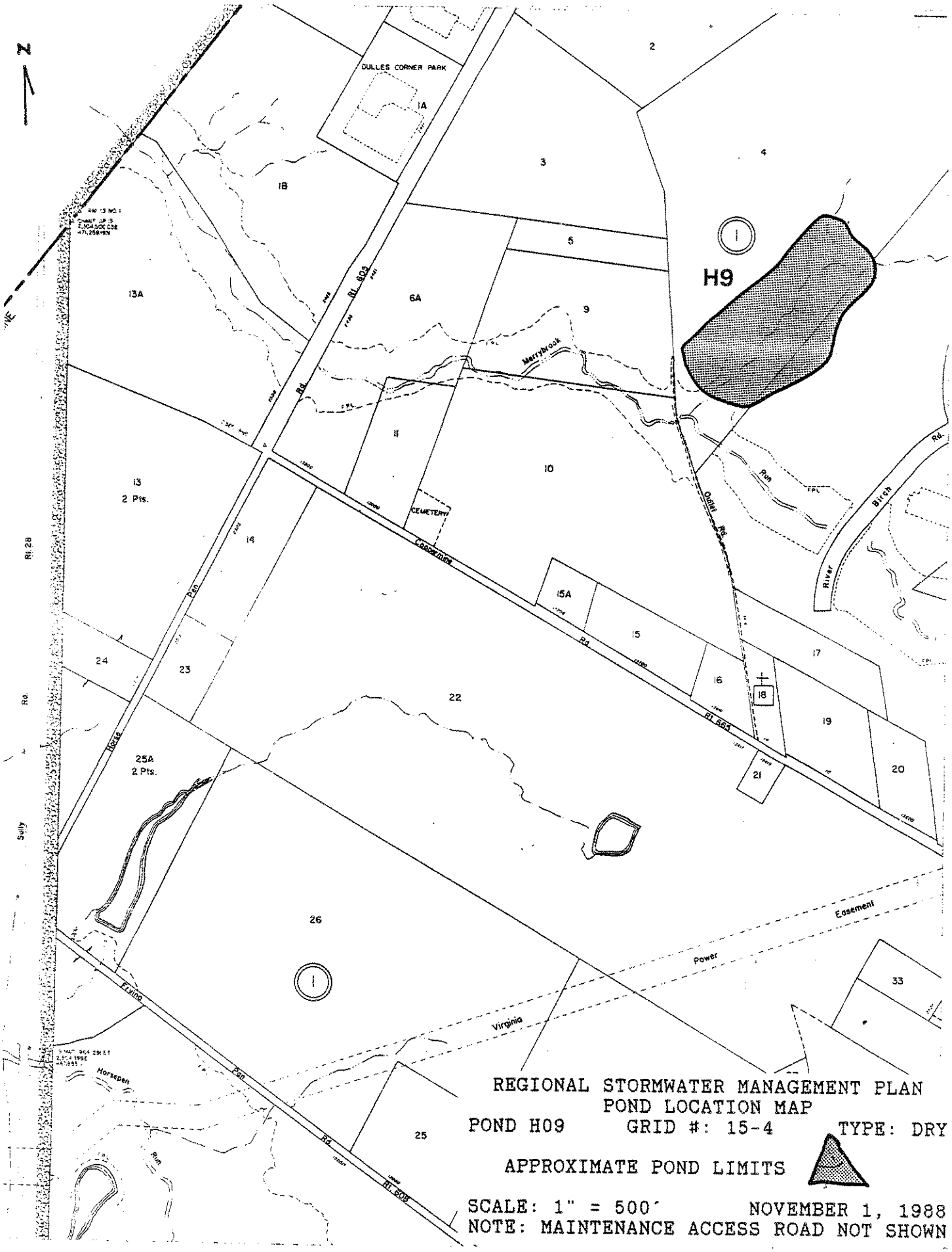
SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND H07 GRID #:25-3 & 35-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H09 GRID #: 15-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H13 GRID #: 35-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

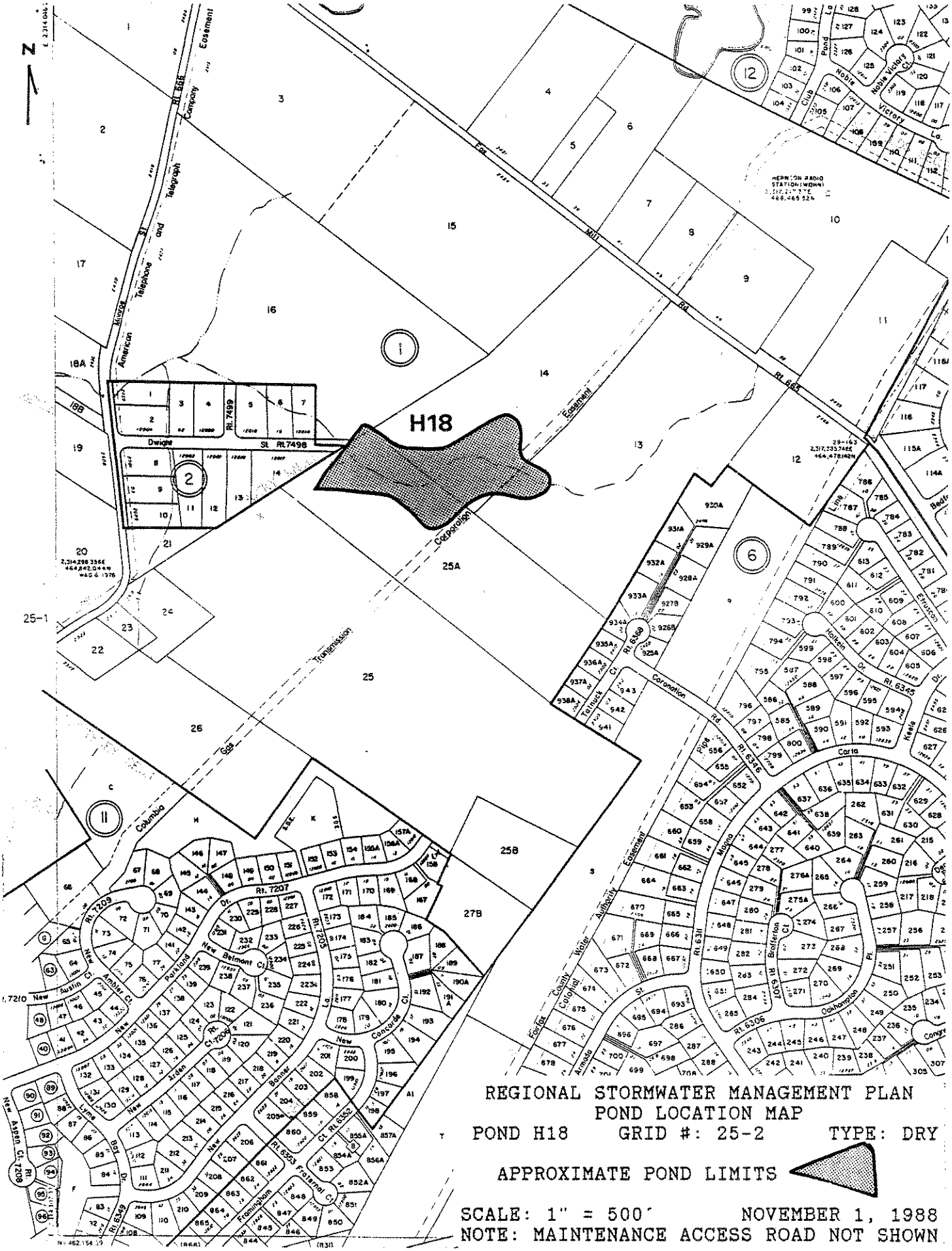
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H16 GRID #: 25-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND H18 GRID #: 25-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

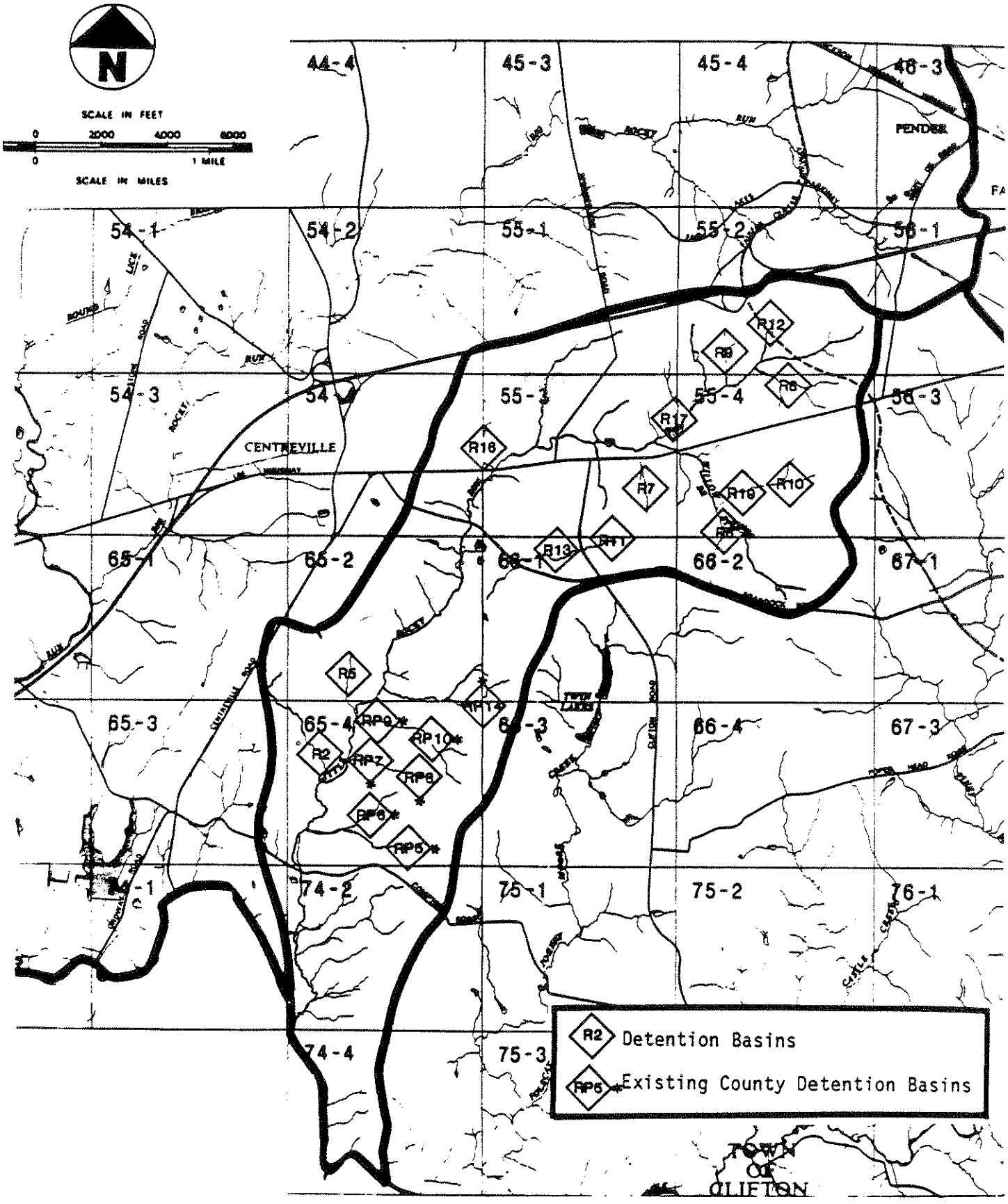
REGIONAL POND LOCATION MAPS

FOR

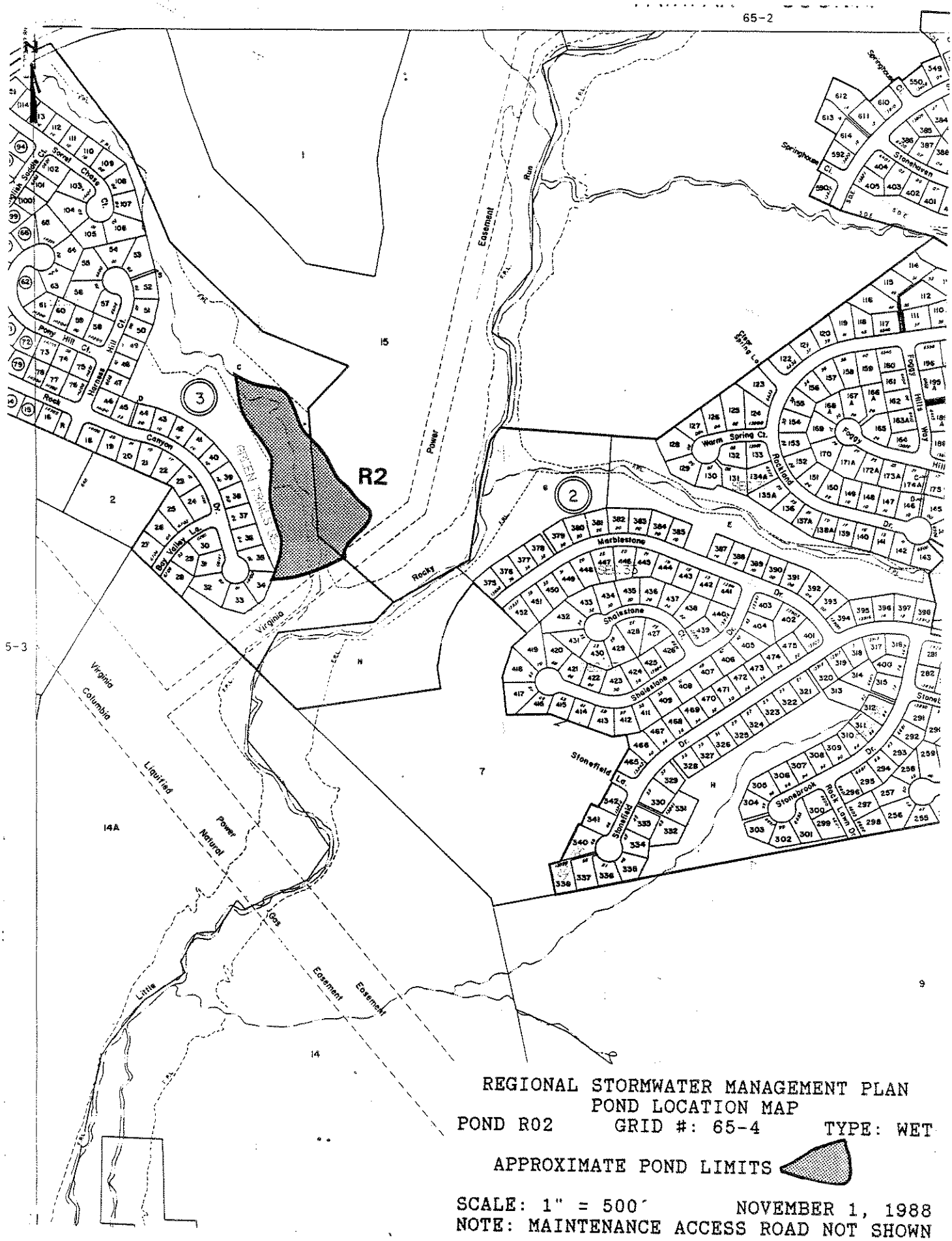
LITTLE ROCKY RUN

- Vicinity Map for Regional Pond Locations . . . . . Page 122

- Individual Regional Pond Location Maps . . . . . Page 123 - 135



Little Rocky Run: Vicinity Map for Regional Pond Locations



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R02 GRID #: 65-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R05 GRID #: 65-2 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

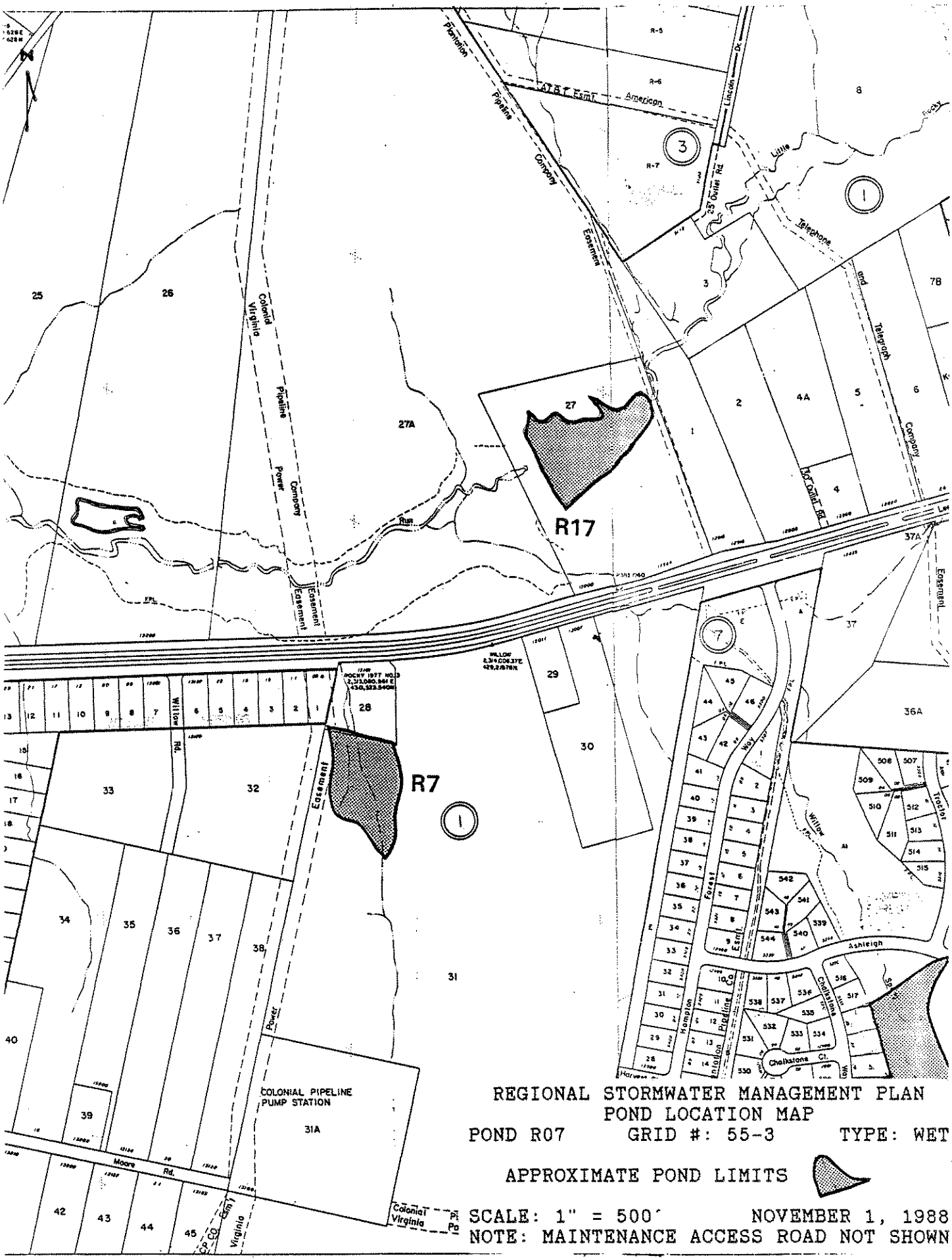
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R06 GRID #: 55-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R07 GRID #: 55-3 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R08 GRID #: 55-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

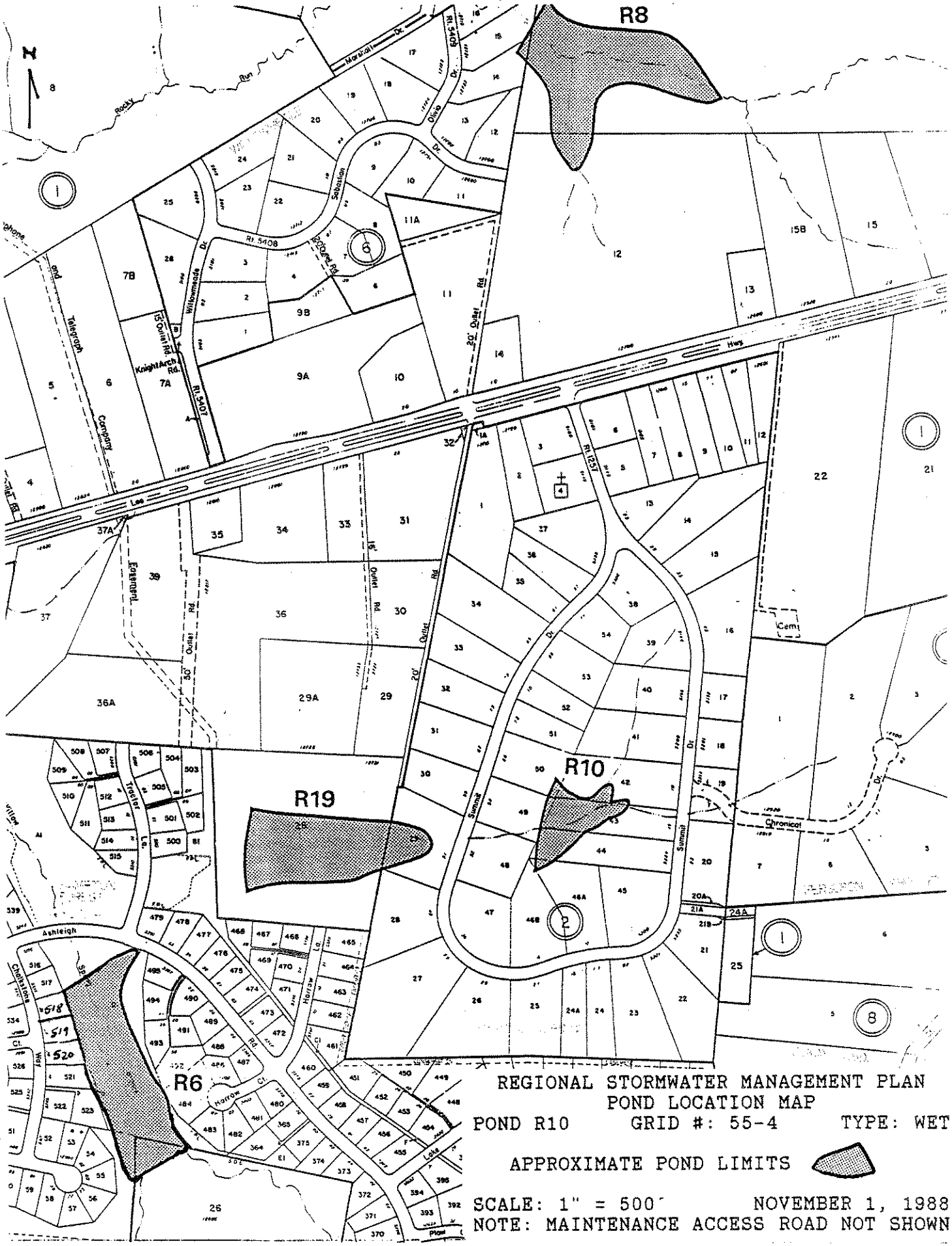
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R09 GRID #: 55-2 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



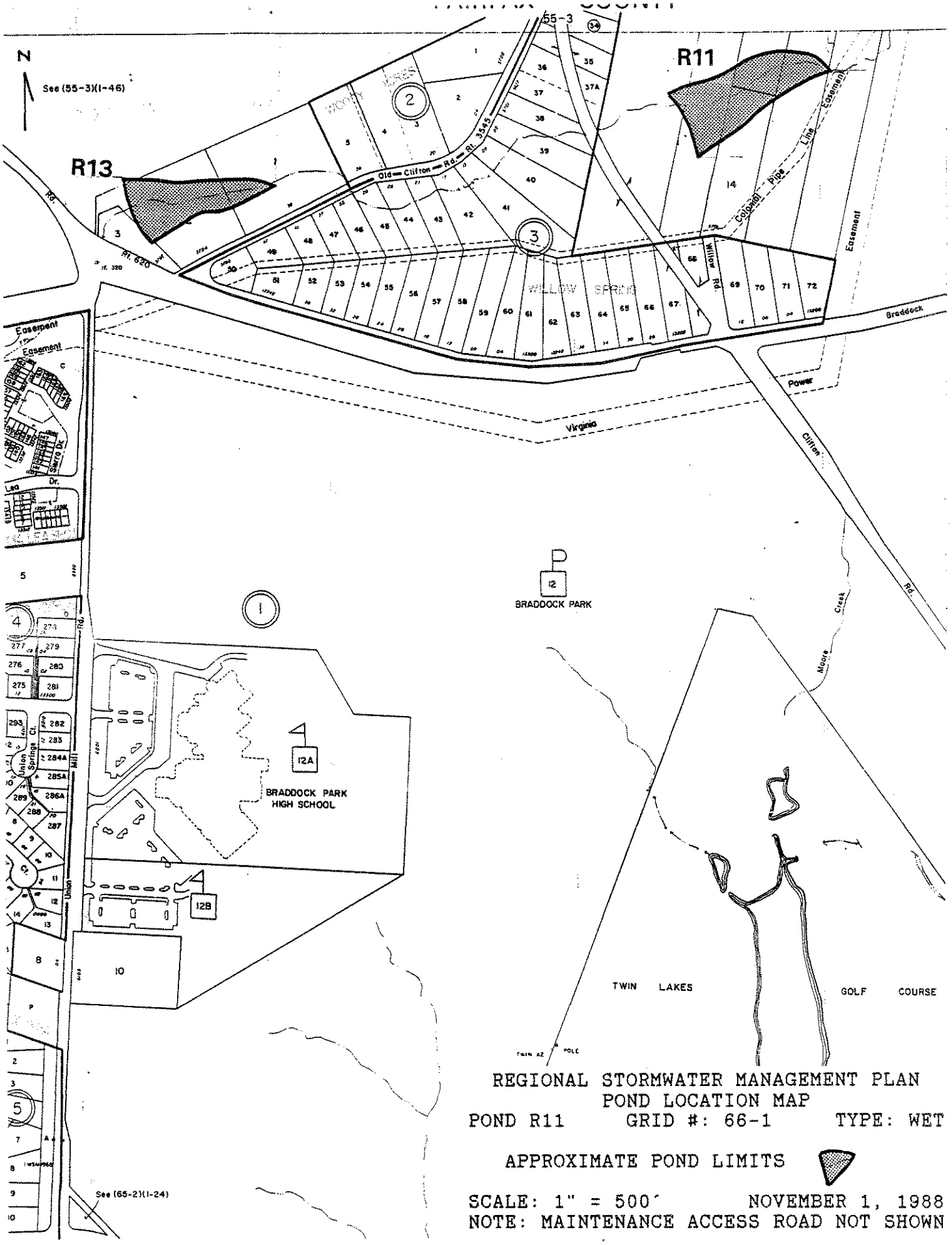
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R10 GRID #: 55-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



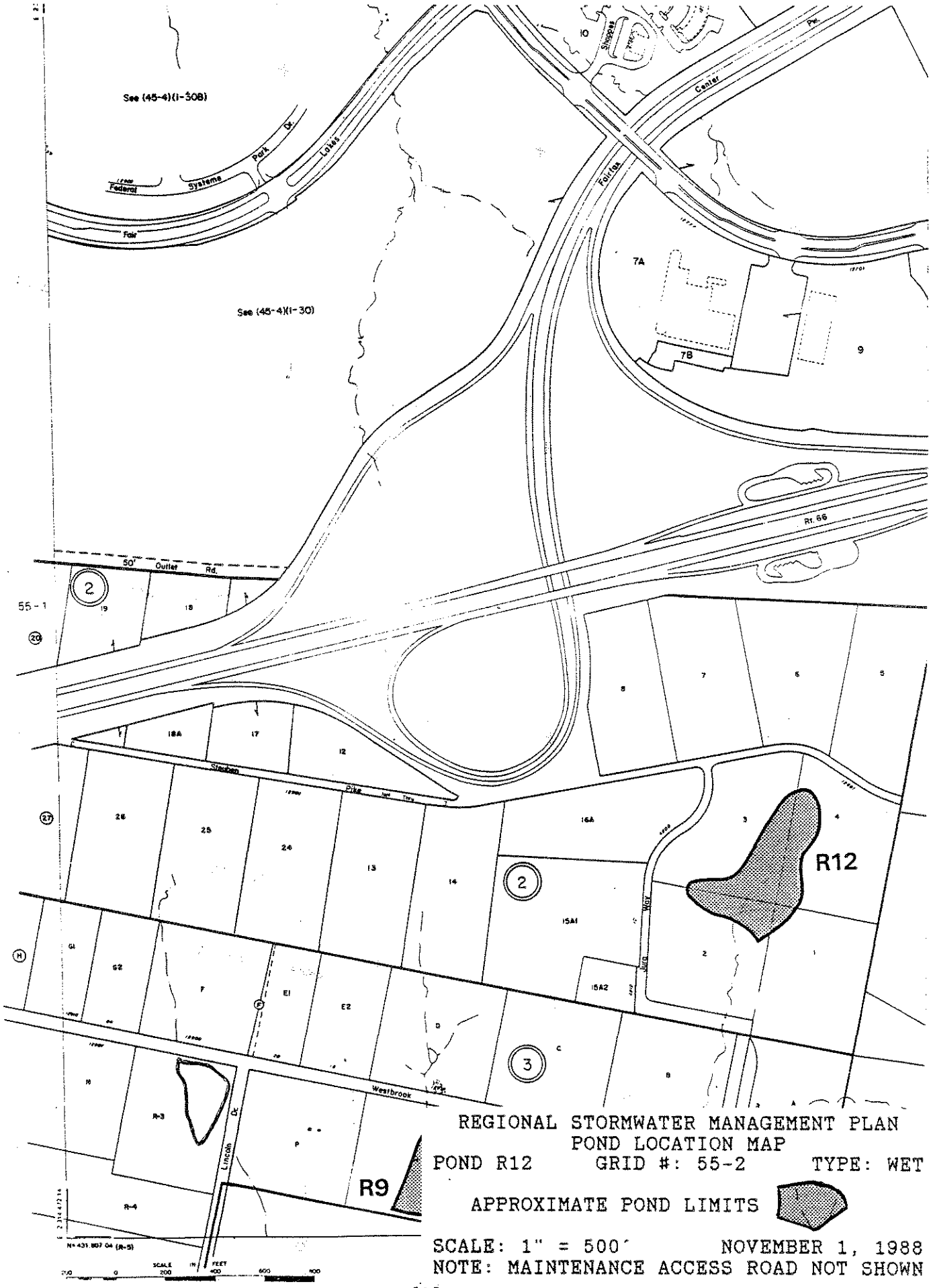
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R11 GRID #: 66-1 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



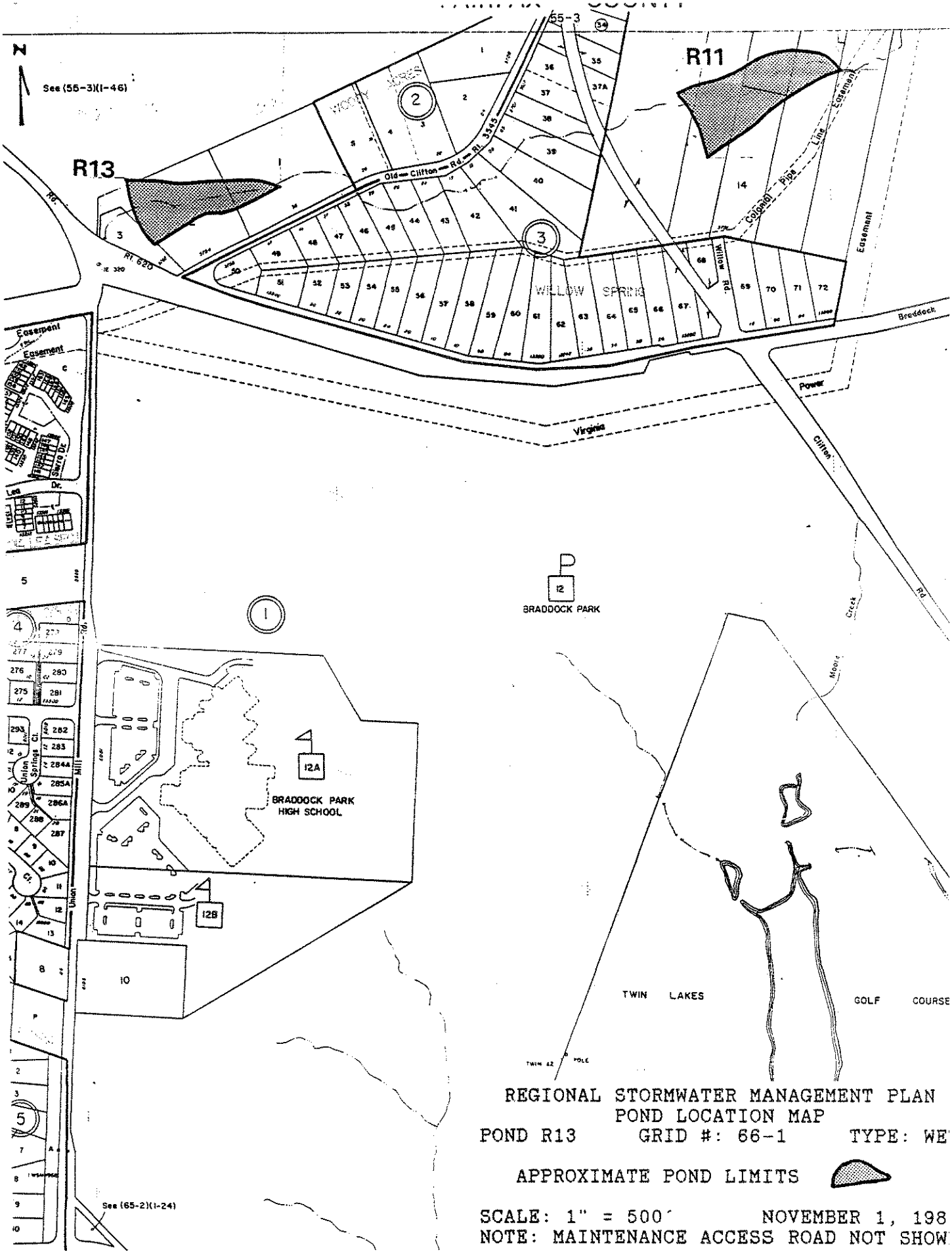
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R12 GRID #: 55-2 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

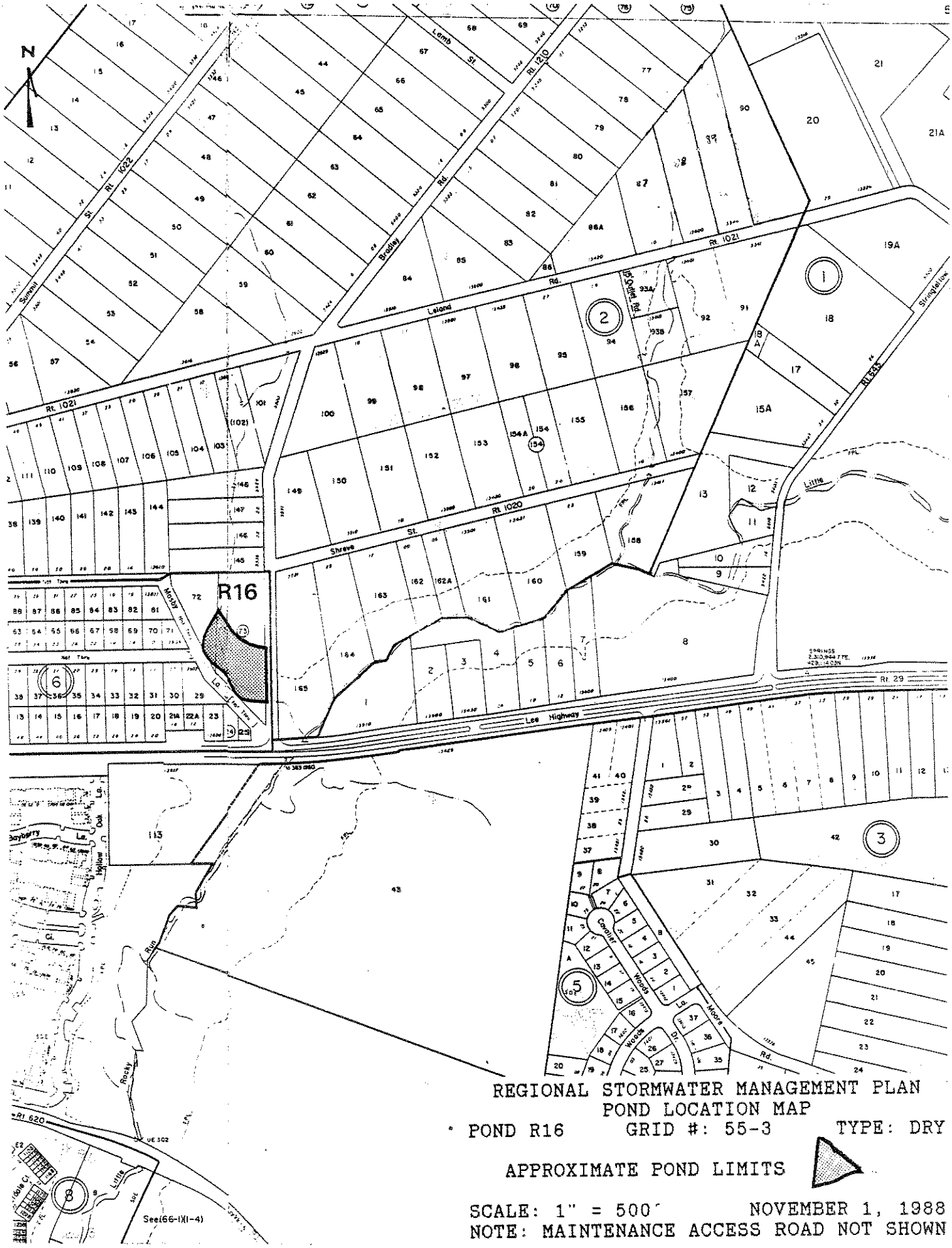
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND R13 GRID #: 66-1 TYPE: WE

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 198
NOTE: MAINTENANCE ACCESS ROAD NOT SHOW



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

• POND R16 GRID #: 55-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND R17 GRID #:55-3 & 55-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND R19 GRID #: 55-4 TYPE: WET

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

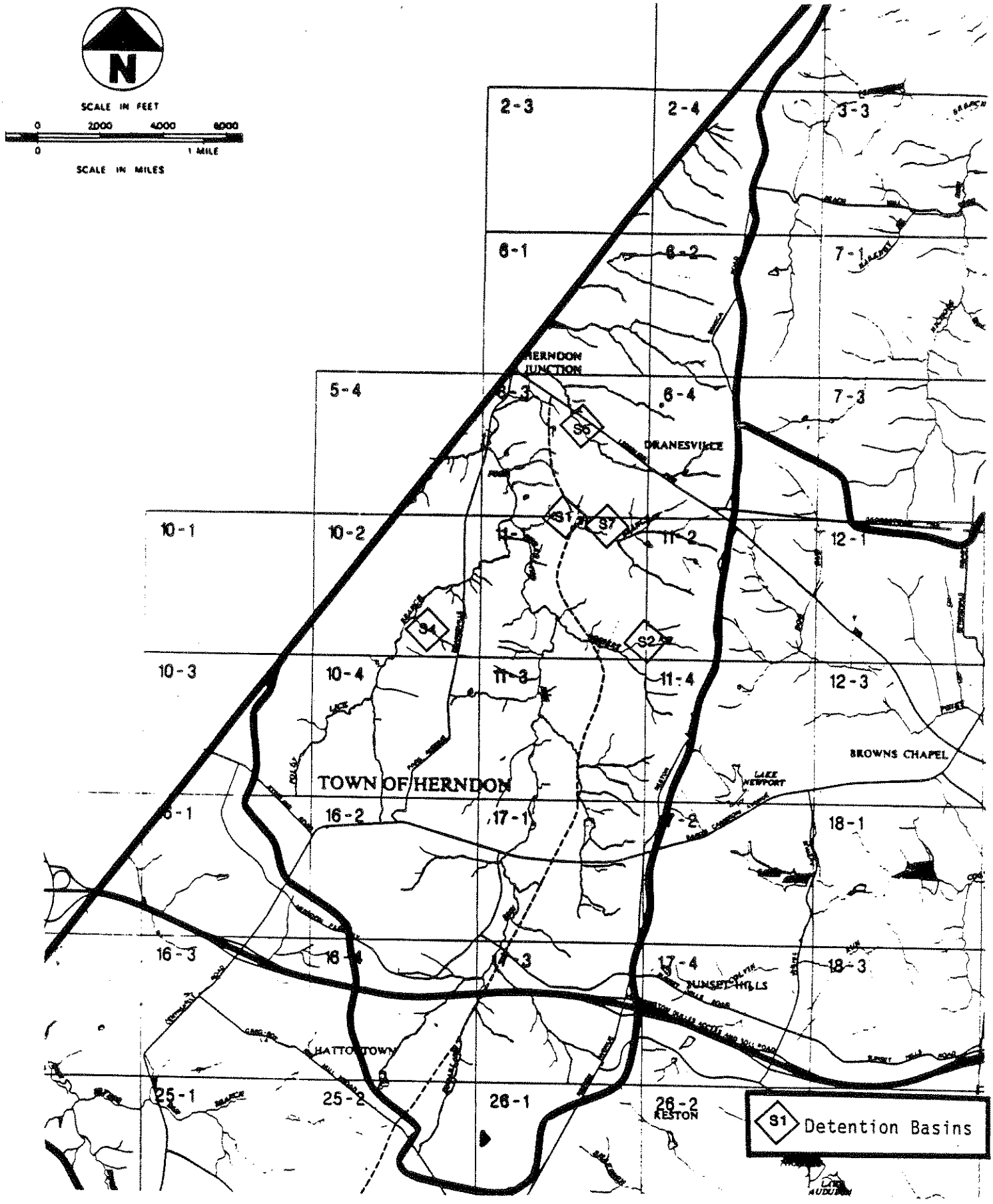
REGIONAL POND LOCATION MAPS

FOR

SUGARLAND RUN

- Vicinity Map for Regional Pond Locations . . . . . Page 137

- Individual Regional Pond Location Maps . . . . . Page 138 - 142



Sugarland Run: Vicinity Map for Regional Pond Locations

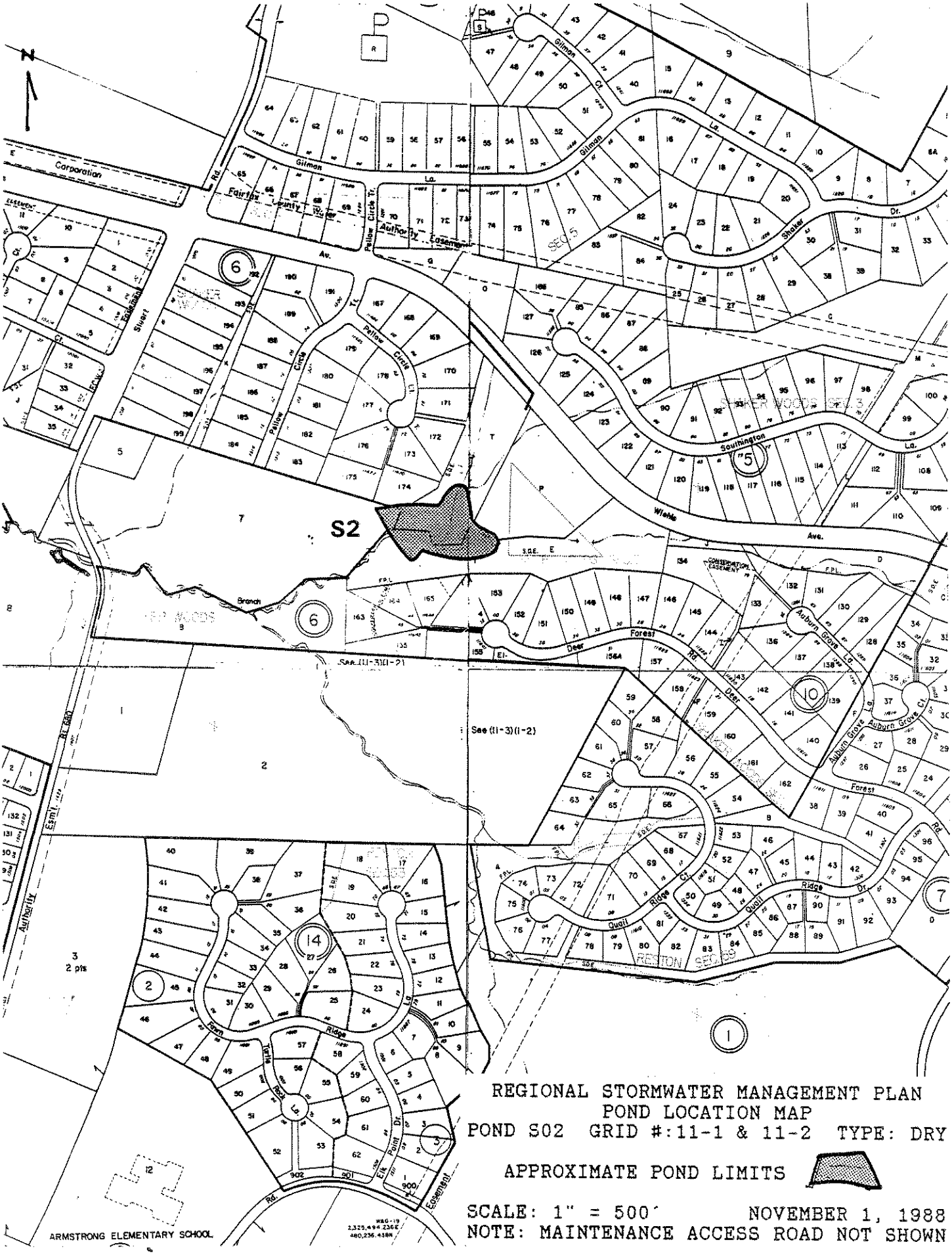
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND S01 GRID #: 11-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

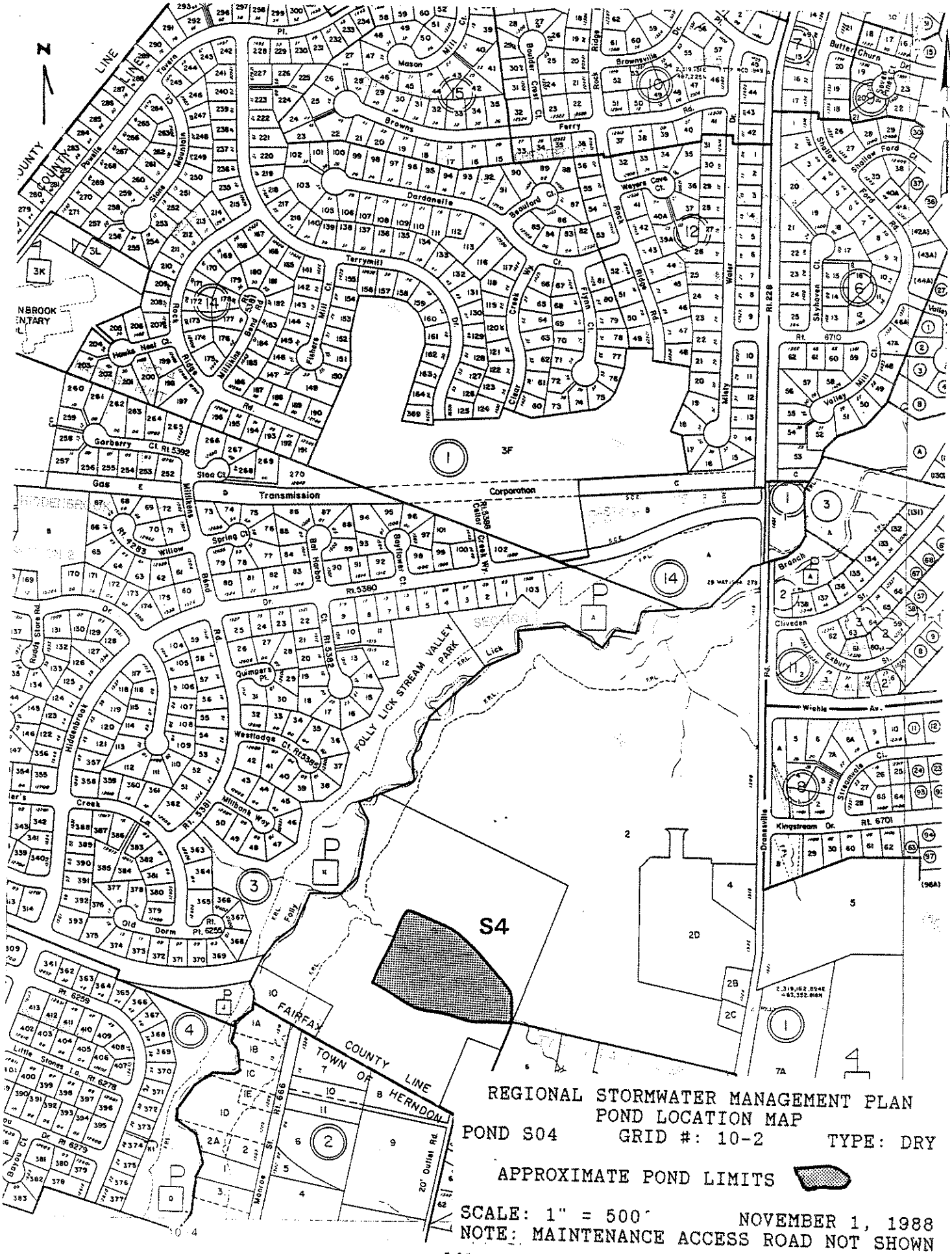
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND S02 GRID #:11-1 & 11-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND S04 GRID #: 10-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND S05 GRID #: 6-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND S07 GRID #: 11-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

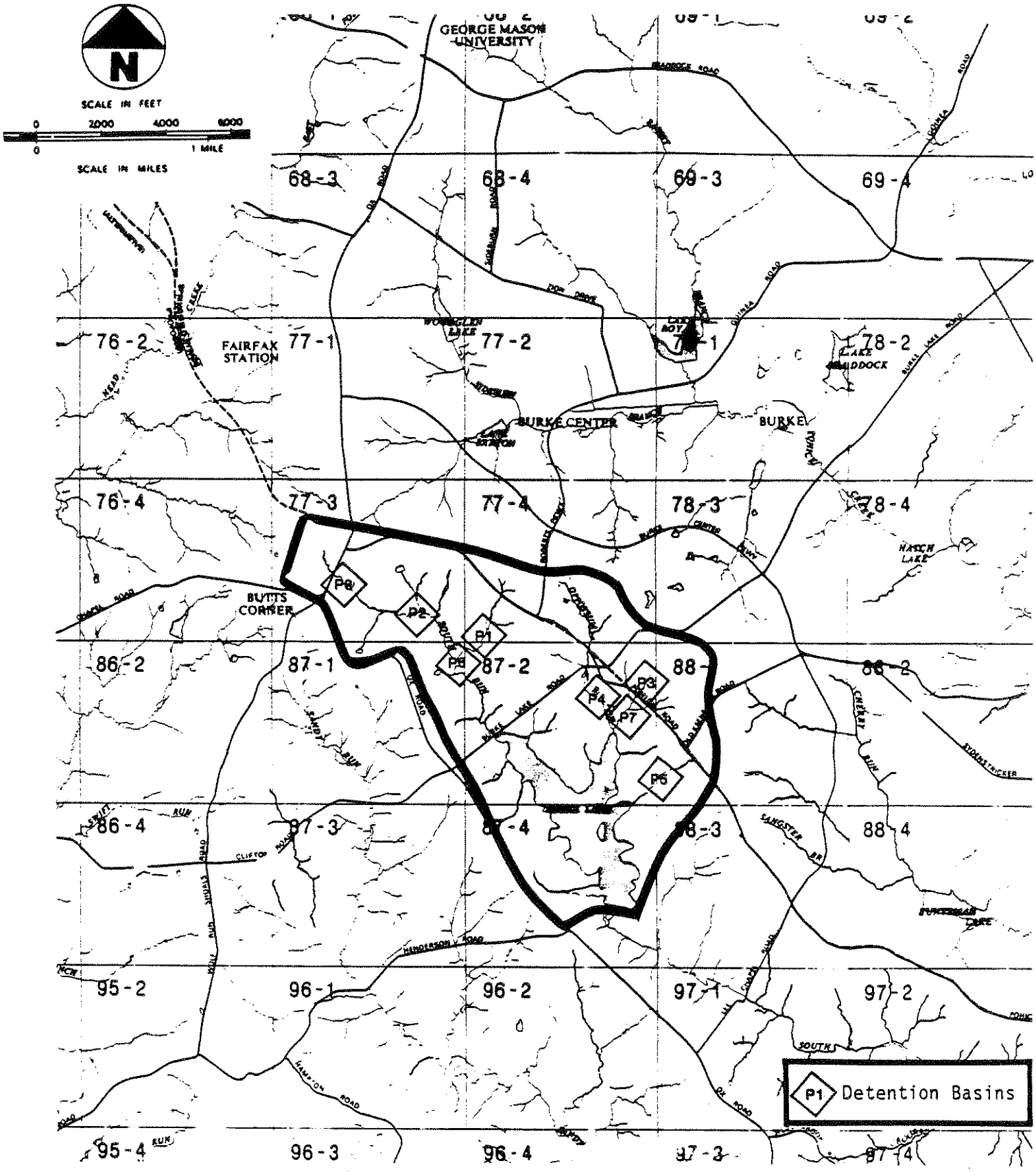
REGIONAL POND LOCATION MAPS

FOR

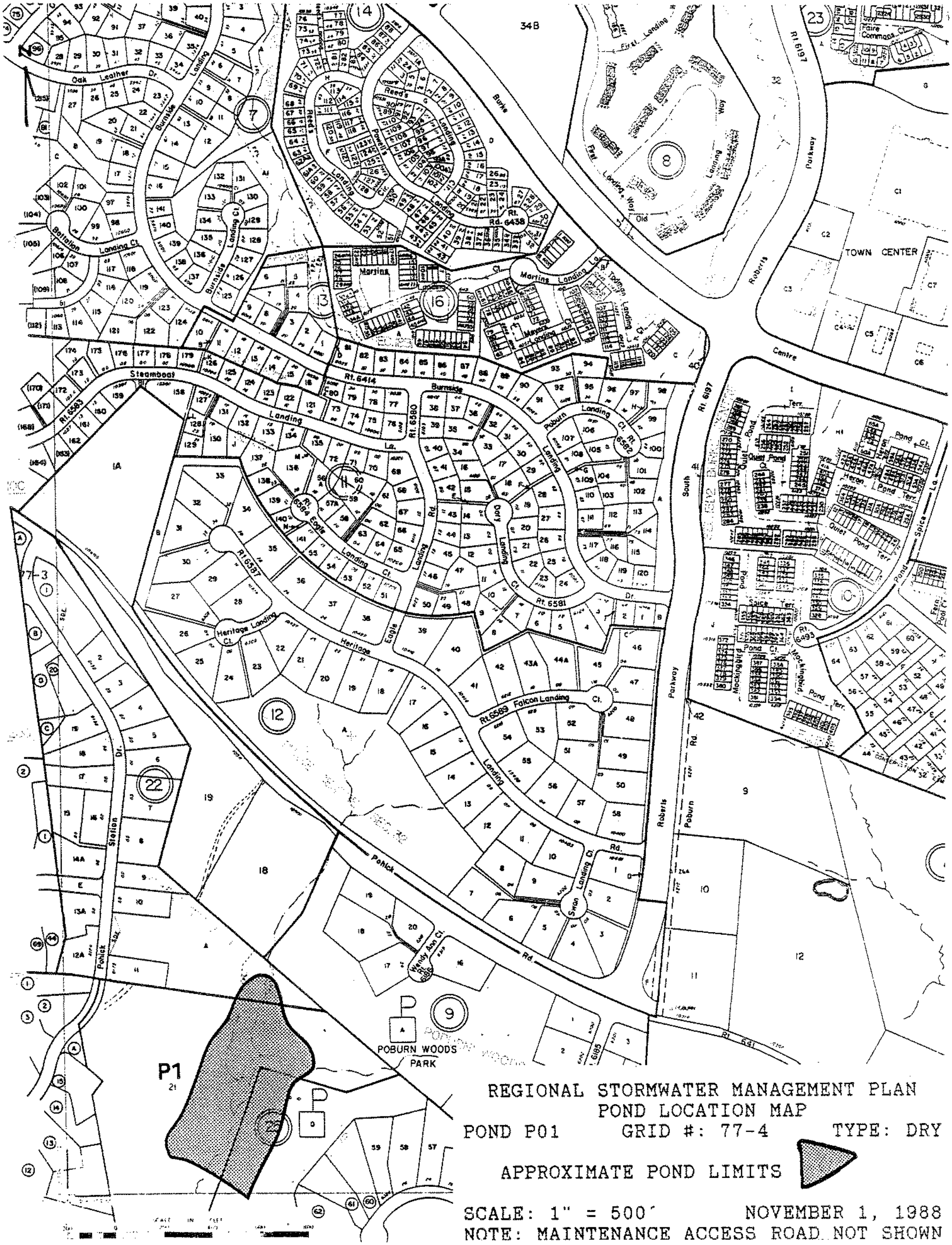
POHICK CREEK
(above Burke Lake)

- Vicinity Map for Regional Pond Locations . . . . . Page 144

- Individual Regional Pond Location Maps . . . . . Page 145- 152



Pohick Creek: Vicinity Map for Regional Pond Locations


TOWN CENTER
Roberts Parkway
South Roberts Parkway
Burke Centre Parkway
Burnside Landing
Steamboat Landing La.
Heritage Landing Ct.
Falcon Landing Ct.
Eagle Landing Ct.
Pohick Rd.
Poburn Rd.
Station Dr.
Swan Landing Ct.
Wendy Ann Ct.
Battalion Landing Ct.
Oak Leather Dr.
Martins Landing Ct.
Quiet Pond Ter.
Spice Pond Ter.
Heron Pond Ter.
Mockingbird Pond Ct.
POBURN WOODS PARK
P1

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P01 GRID #: 77-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

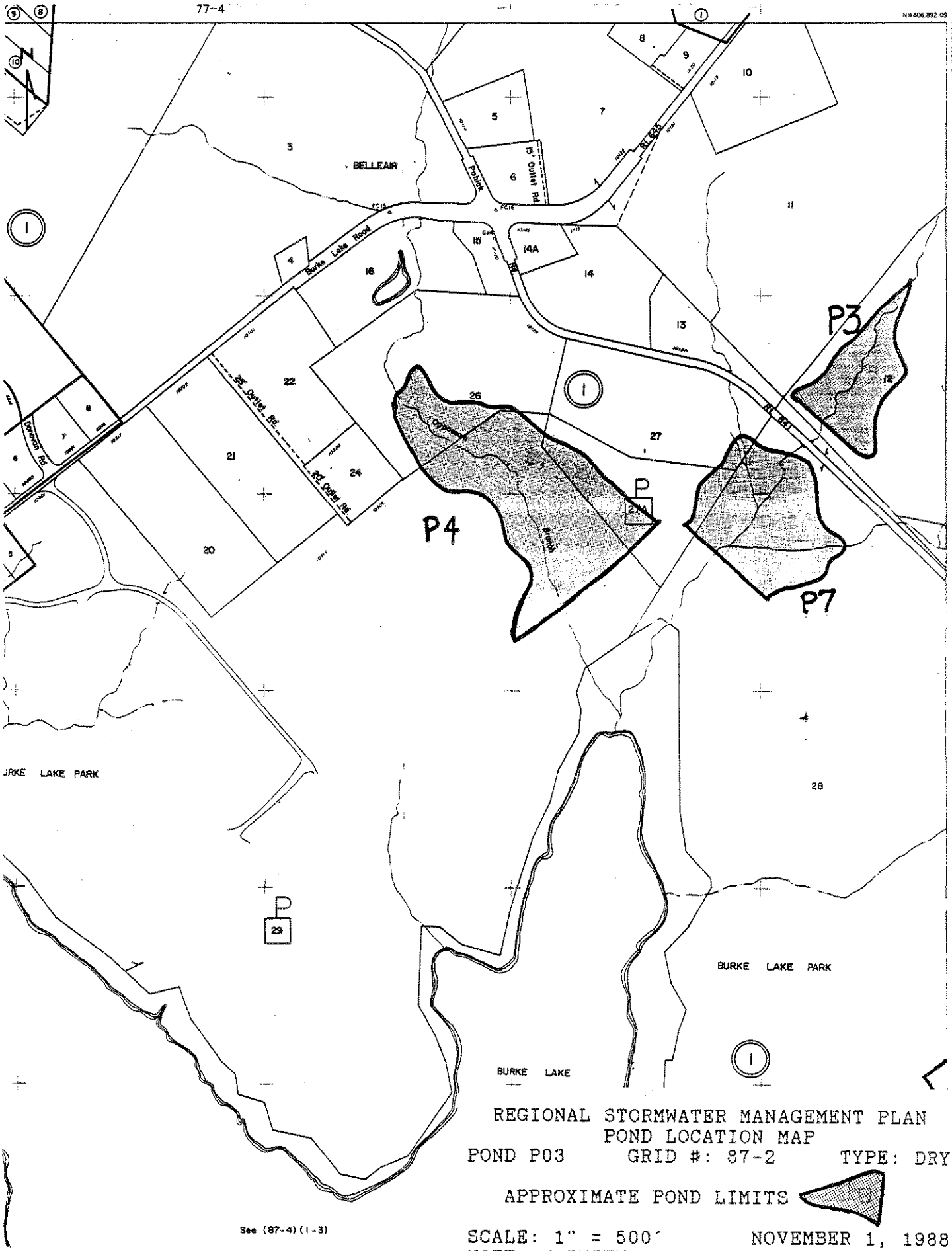
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P02 GRID #: 77-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



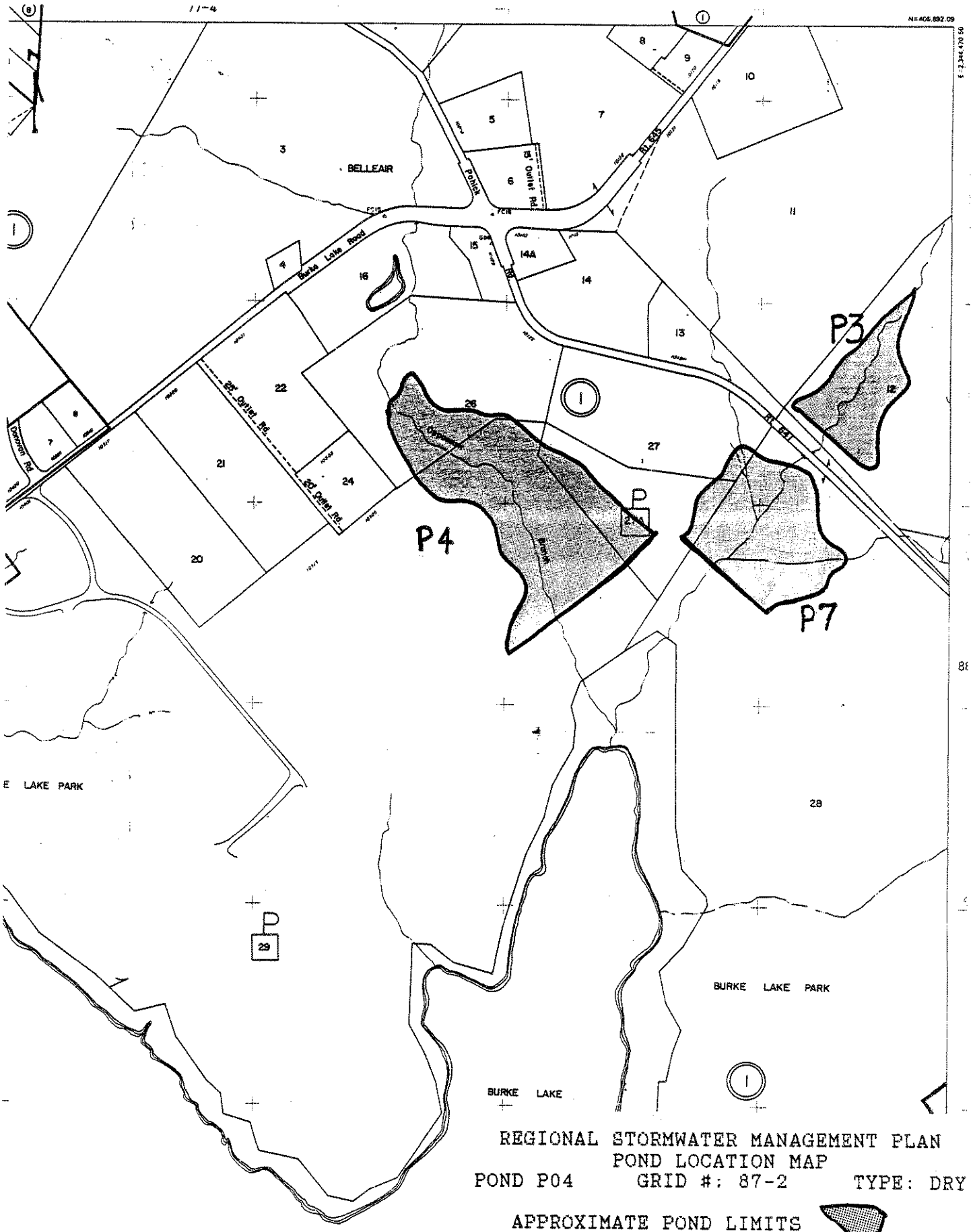
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P03 GRID #: 87-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



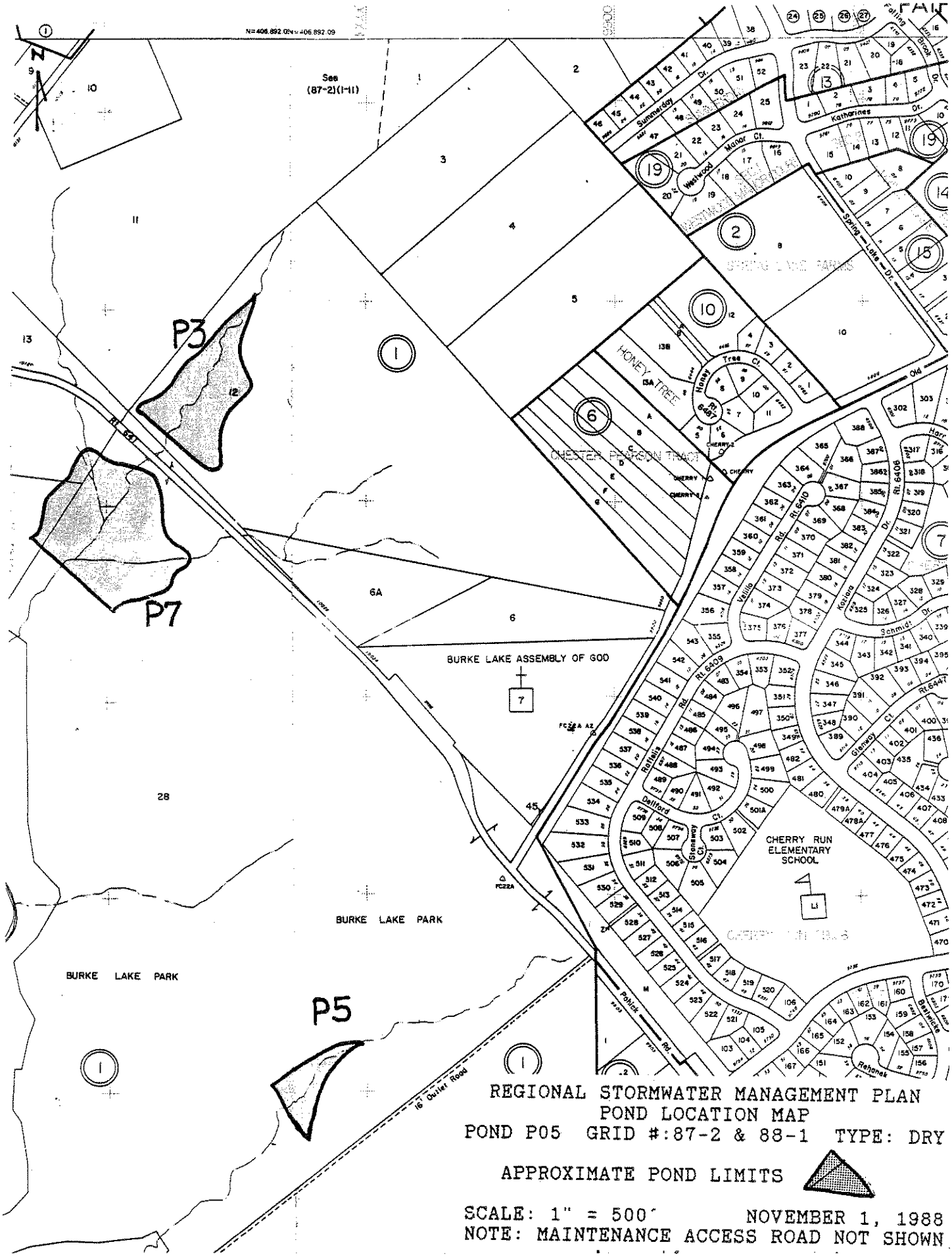
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P04 GRID #: 87-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

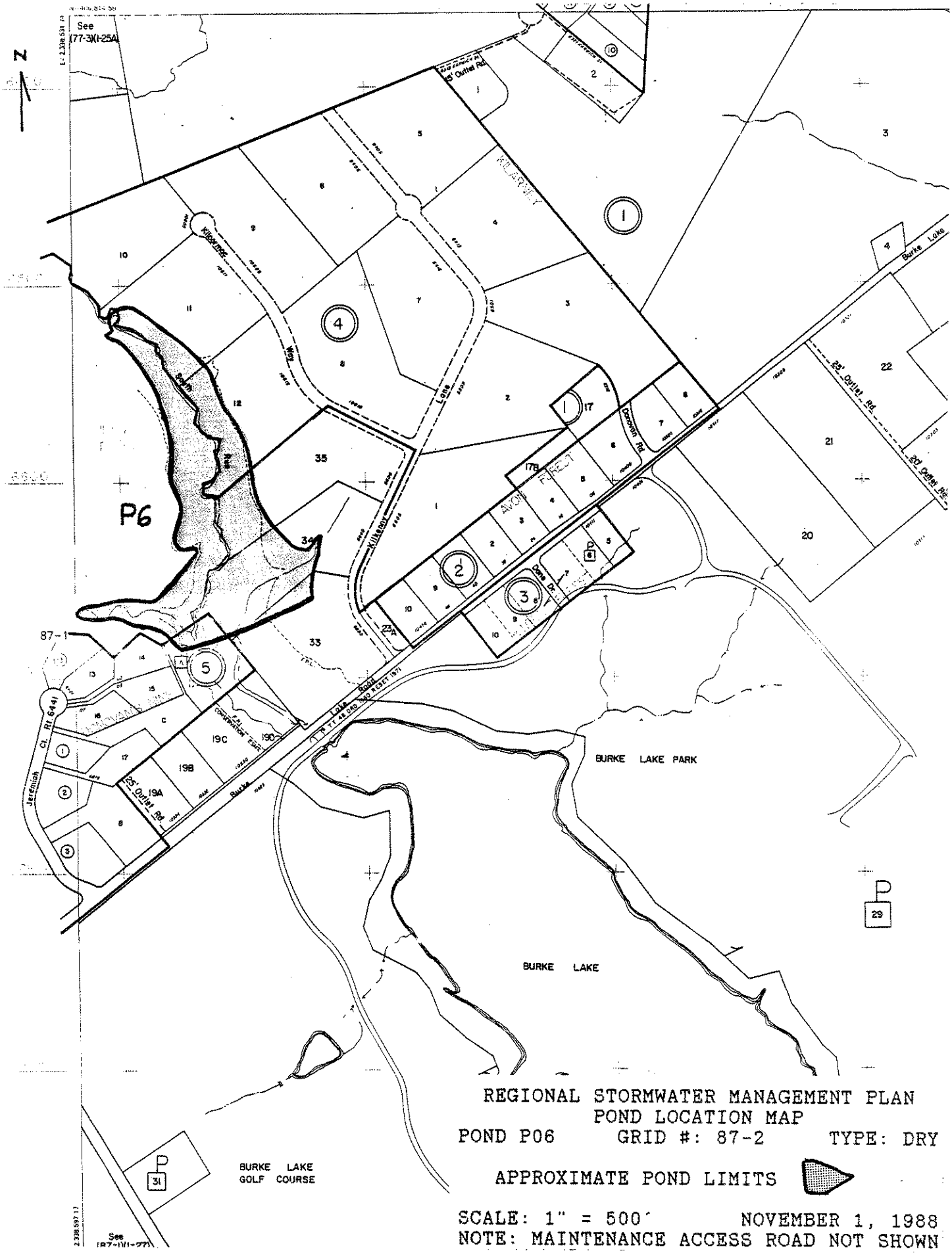
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND P05 GRID #:87-2 & 88-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



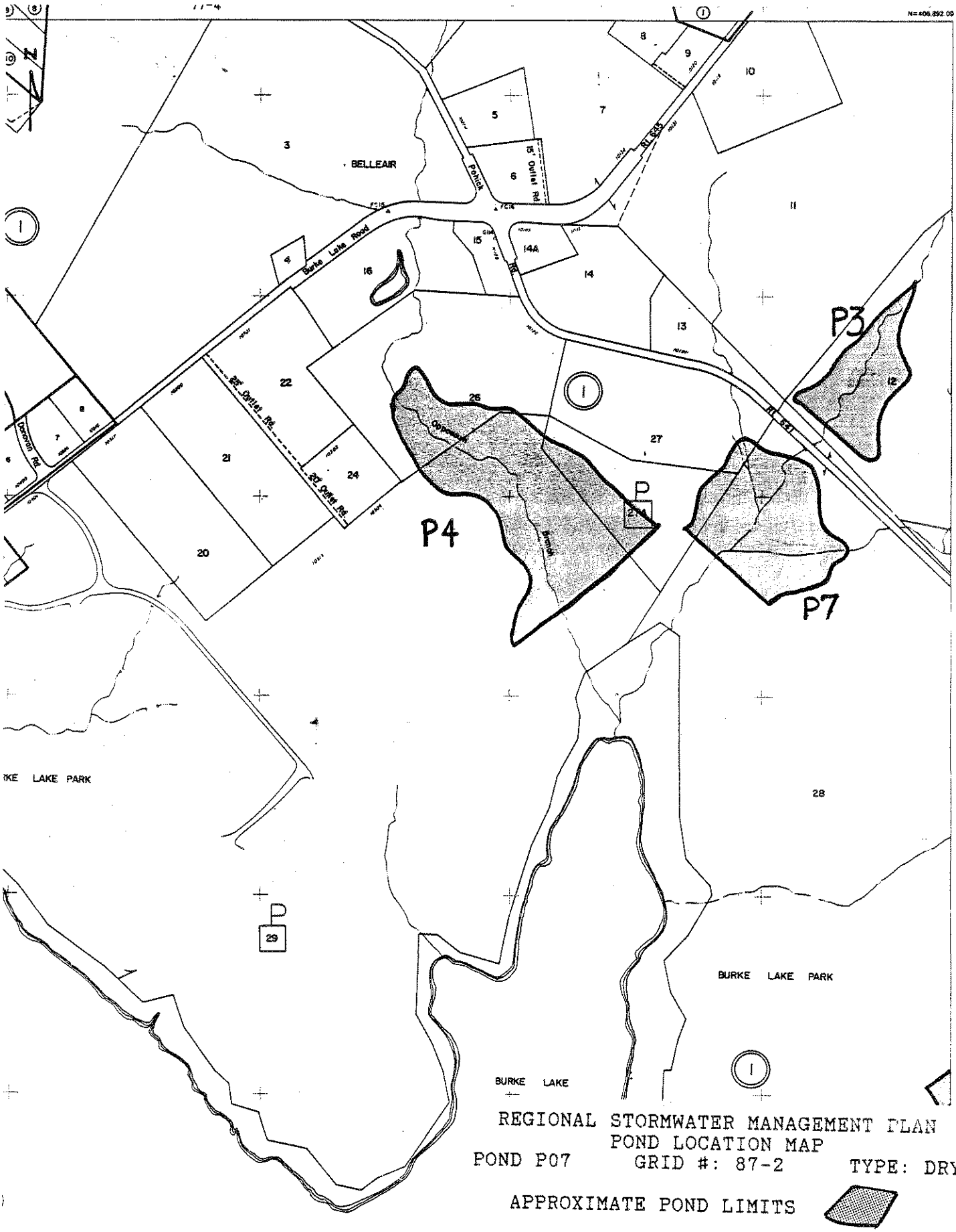
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P06 GRID #: 87-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P07 GRID #: 87-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND P08 GRID #: 77-3 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN

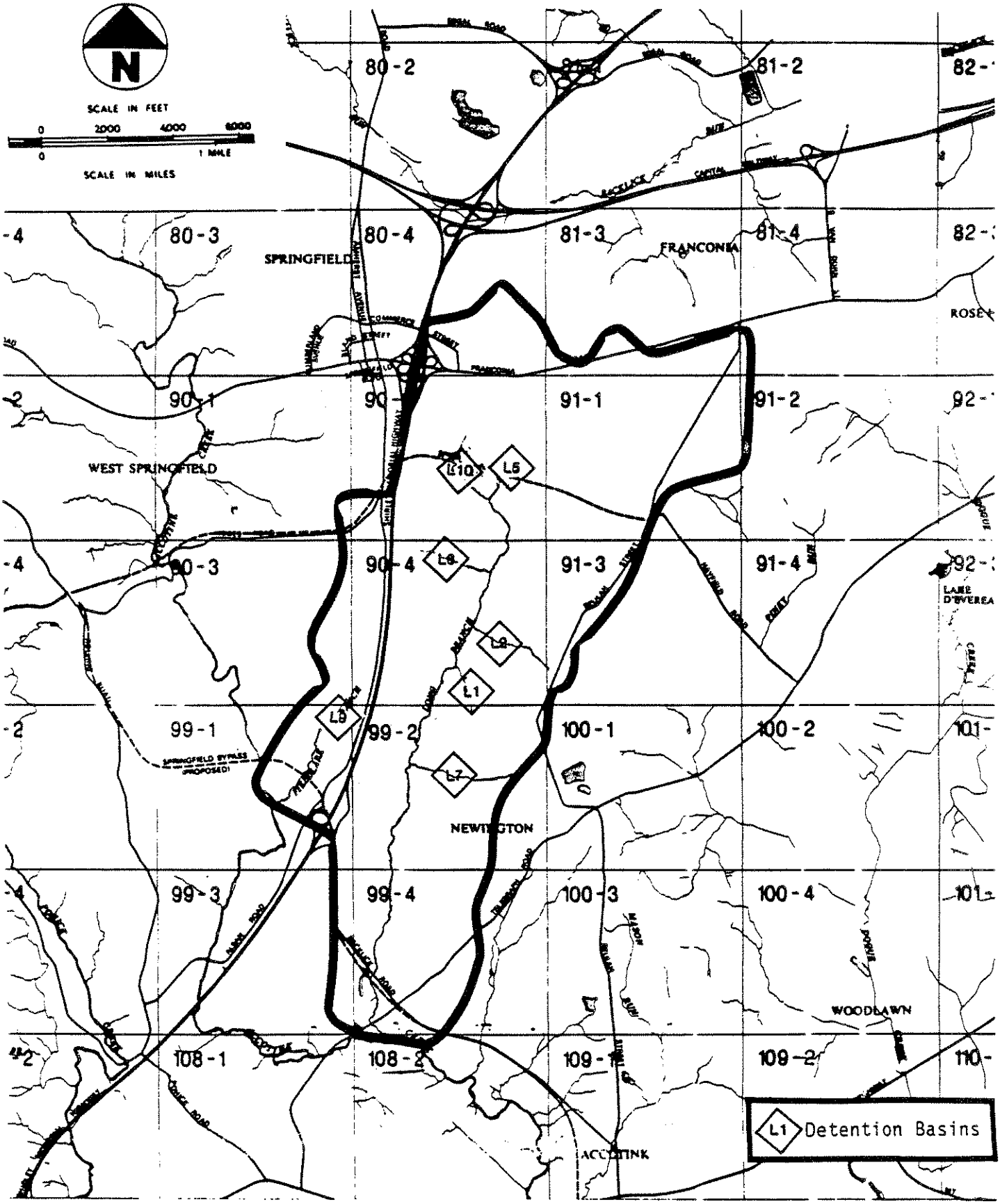
REGIONAL POND LOCATION MAPS

FOR

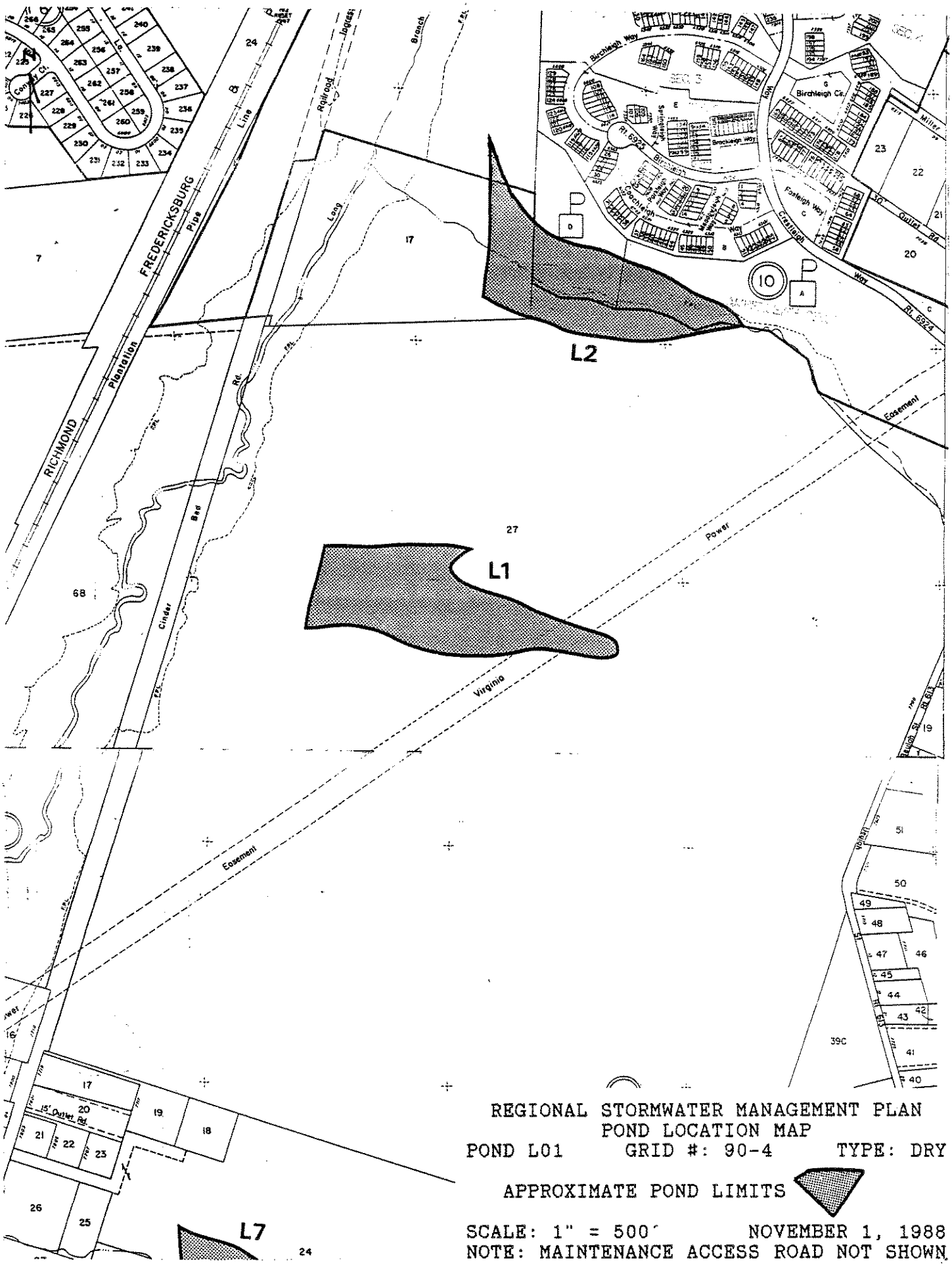
LONG BRANCH
(Tributary to Accotink Creek)

- Vicinity Map for Regional Pond Locations . . . . . Page 154

- Individual Regional Pond Location Maps . . . . . Page 155 - 161



Long Branch: Vicinity Map for Regional Pond Locations



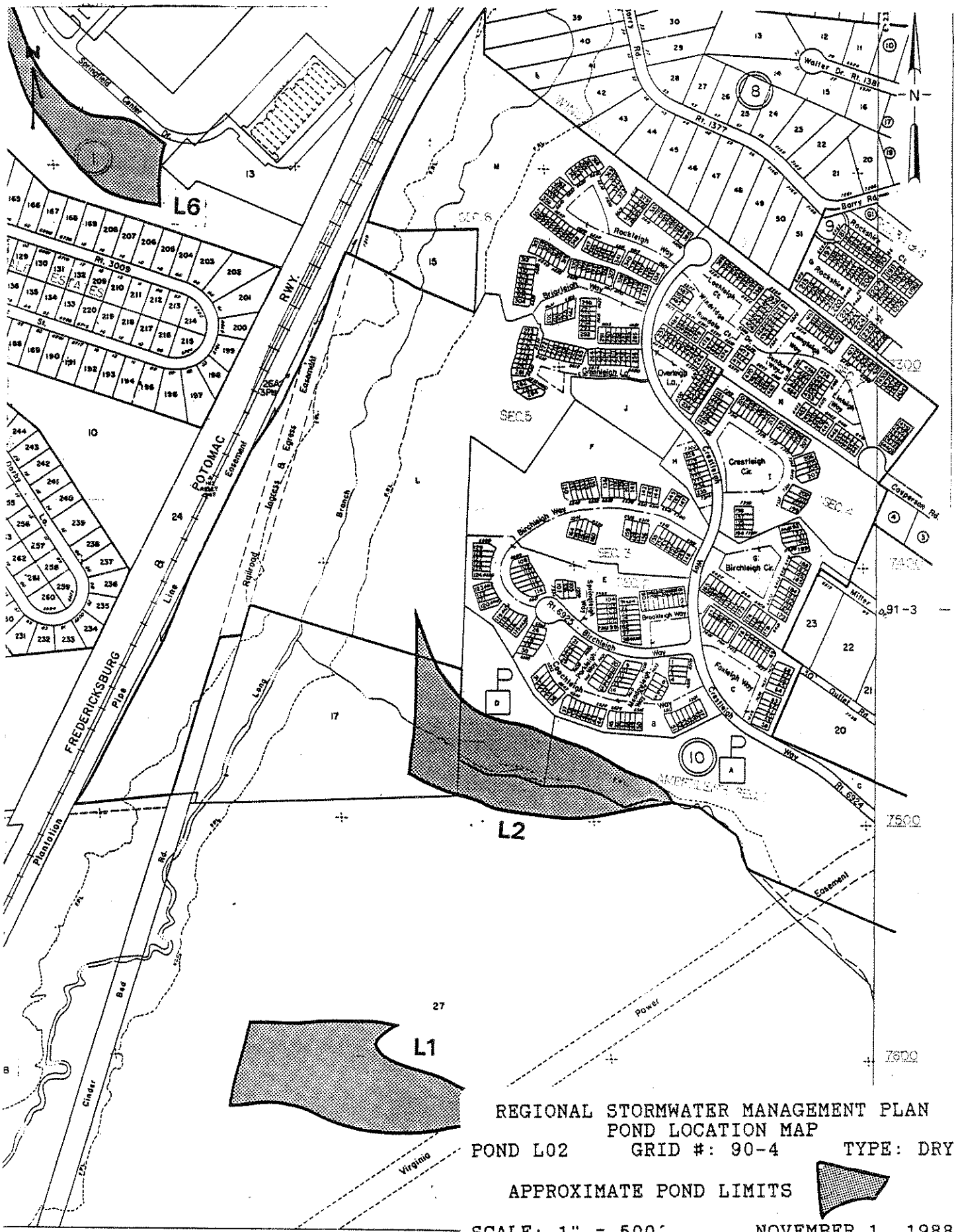
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L01 GRID #: 90-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



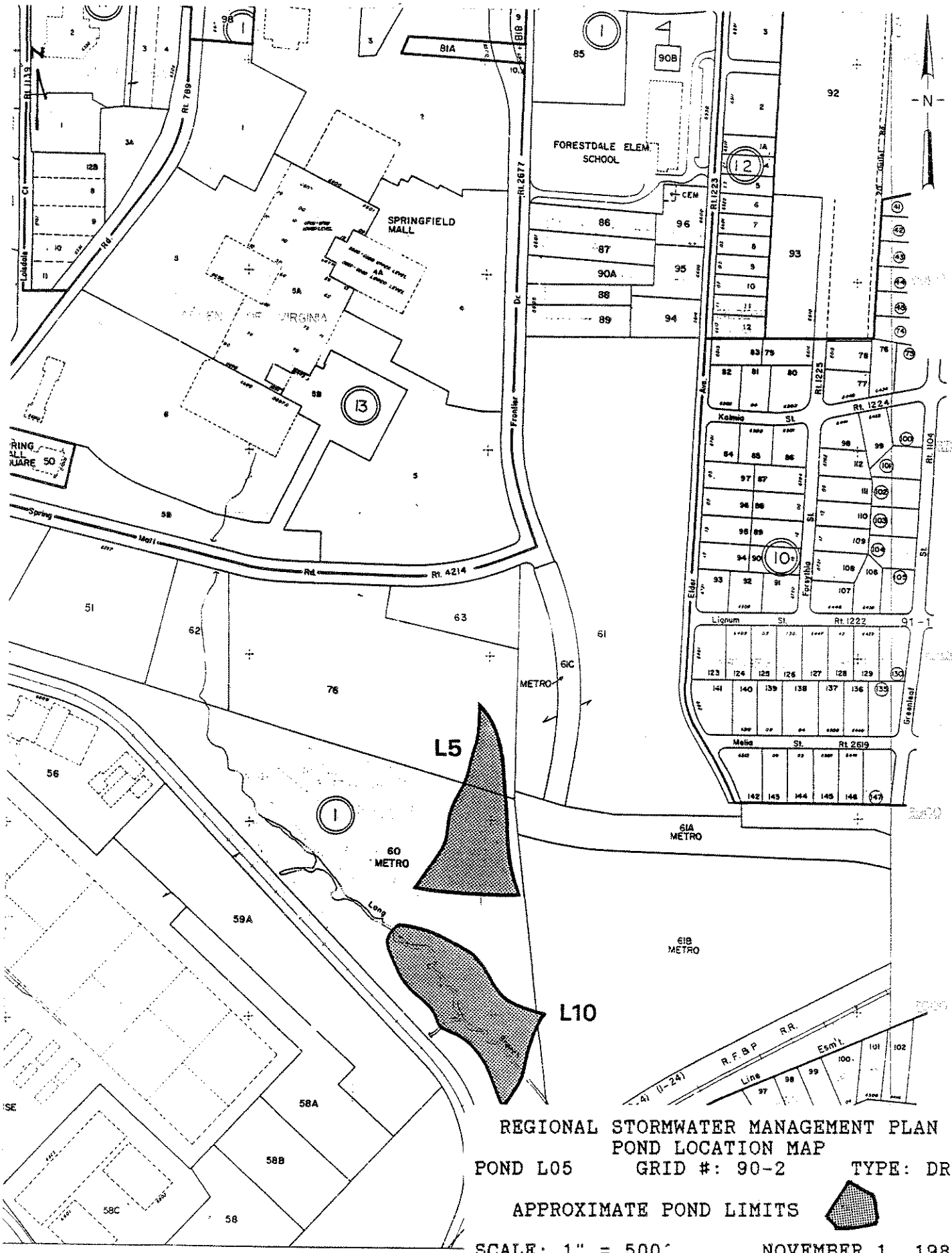
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L02 GRID #: 90-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



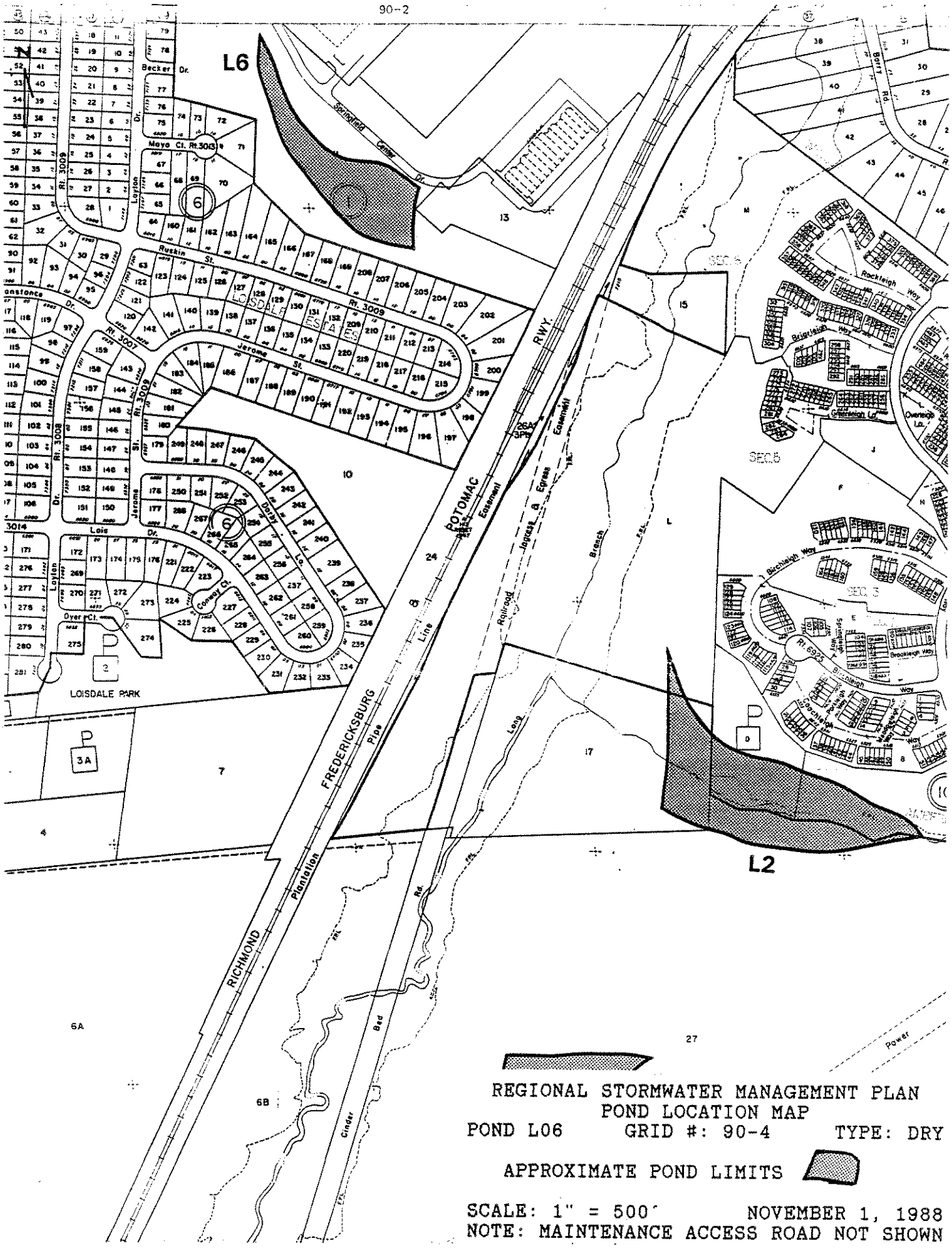
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L05 GRID #: 90-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



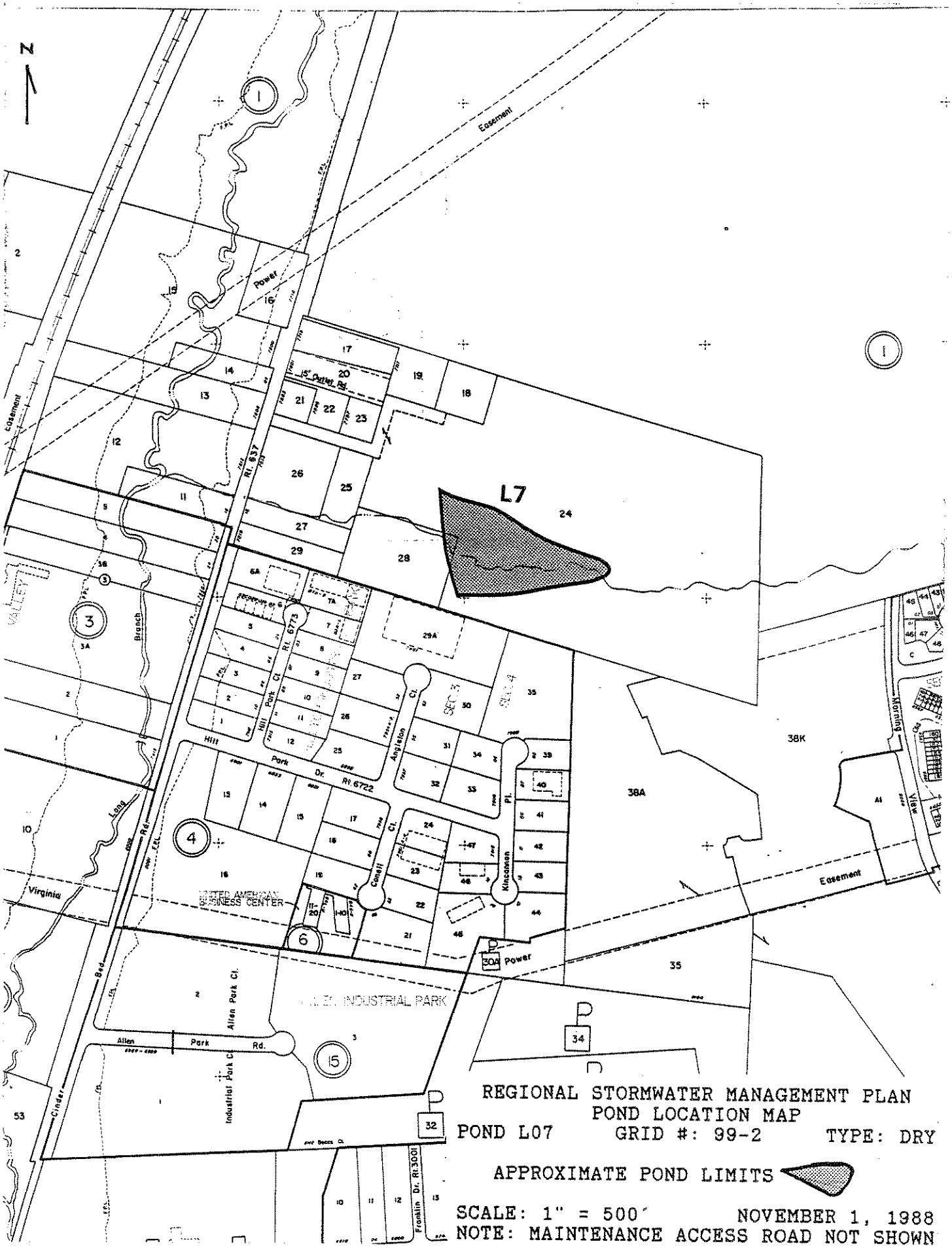
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L06 GRID #: 90-4 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



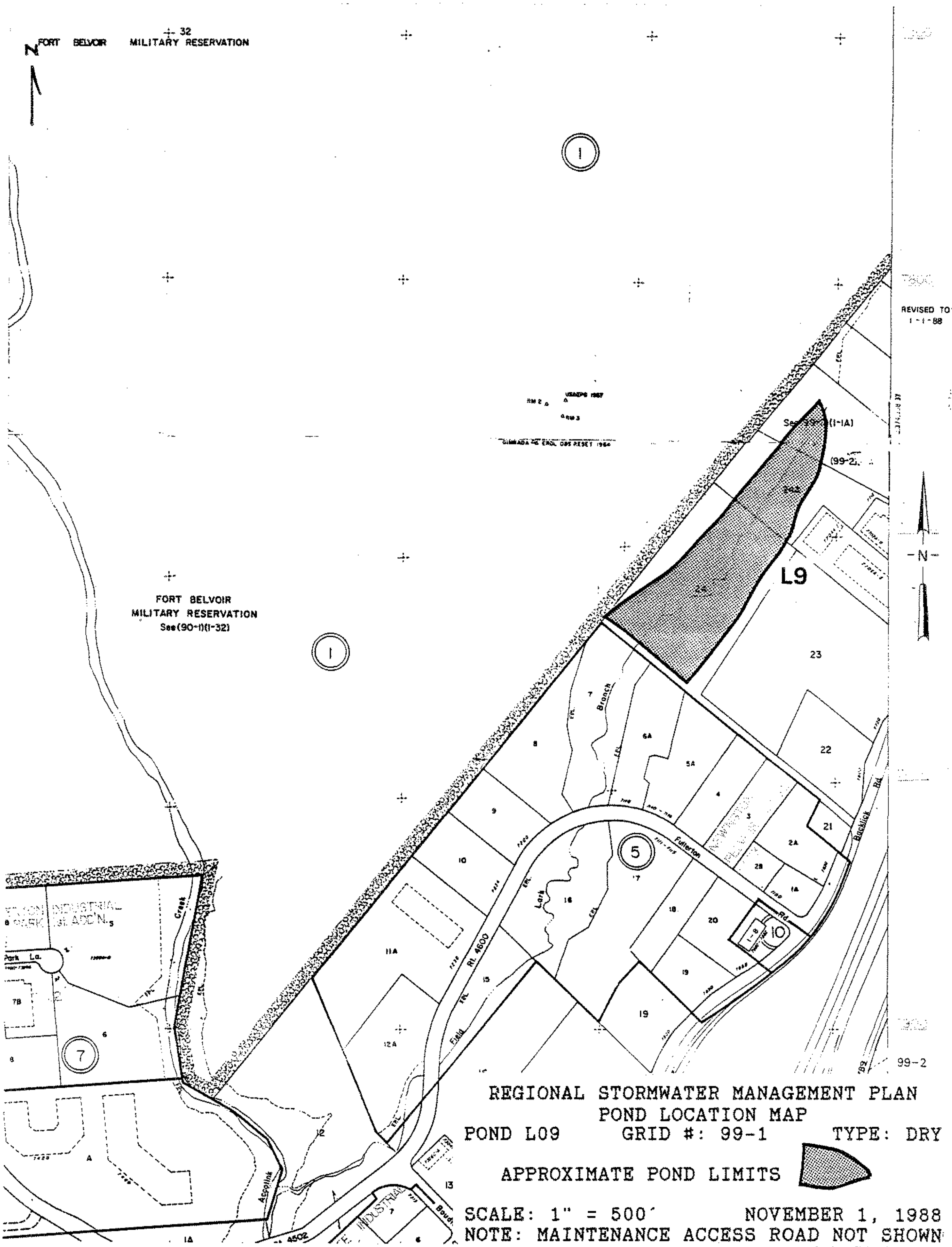
REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L07 GRID #: 99-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

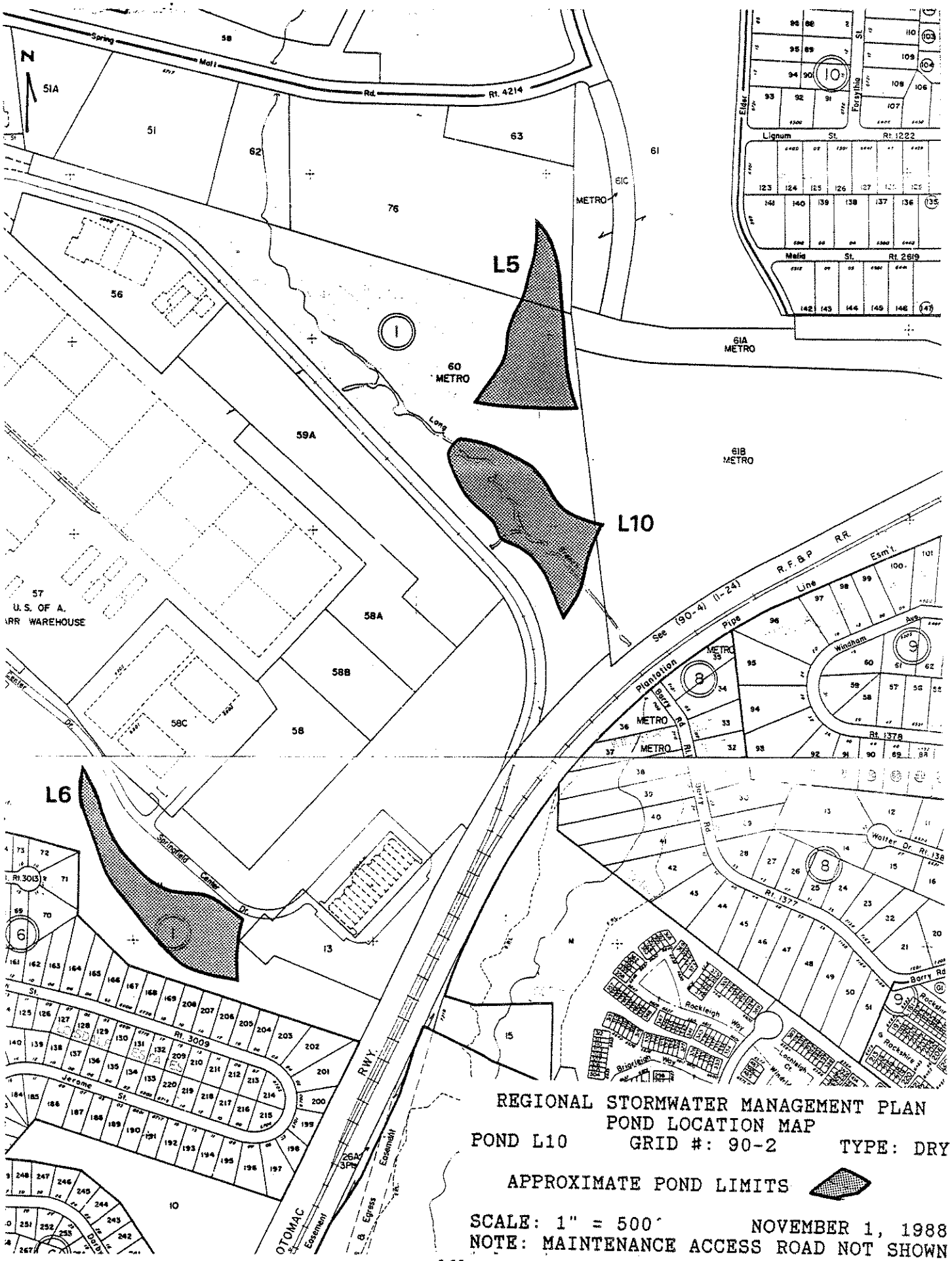
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP
POND L09 GRID #: 99-1 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988
NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN



REGIONAL STORMWATER MANAGEMENT PLAN
POND LOCATION MAP

POND L10 GRID #: 90-2 TYPE: DRY

APPROXIMATE POND LIMITS

SCALE: 1" = 500' NOVEMBER 1, 1988

NOTE: MAINTENANCE ACCESS ROAD NOT SHOWN