

“Mission Statement”

The Purpose of the Township of Monaghan's Comprehensive Plan is to...

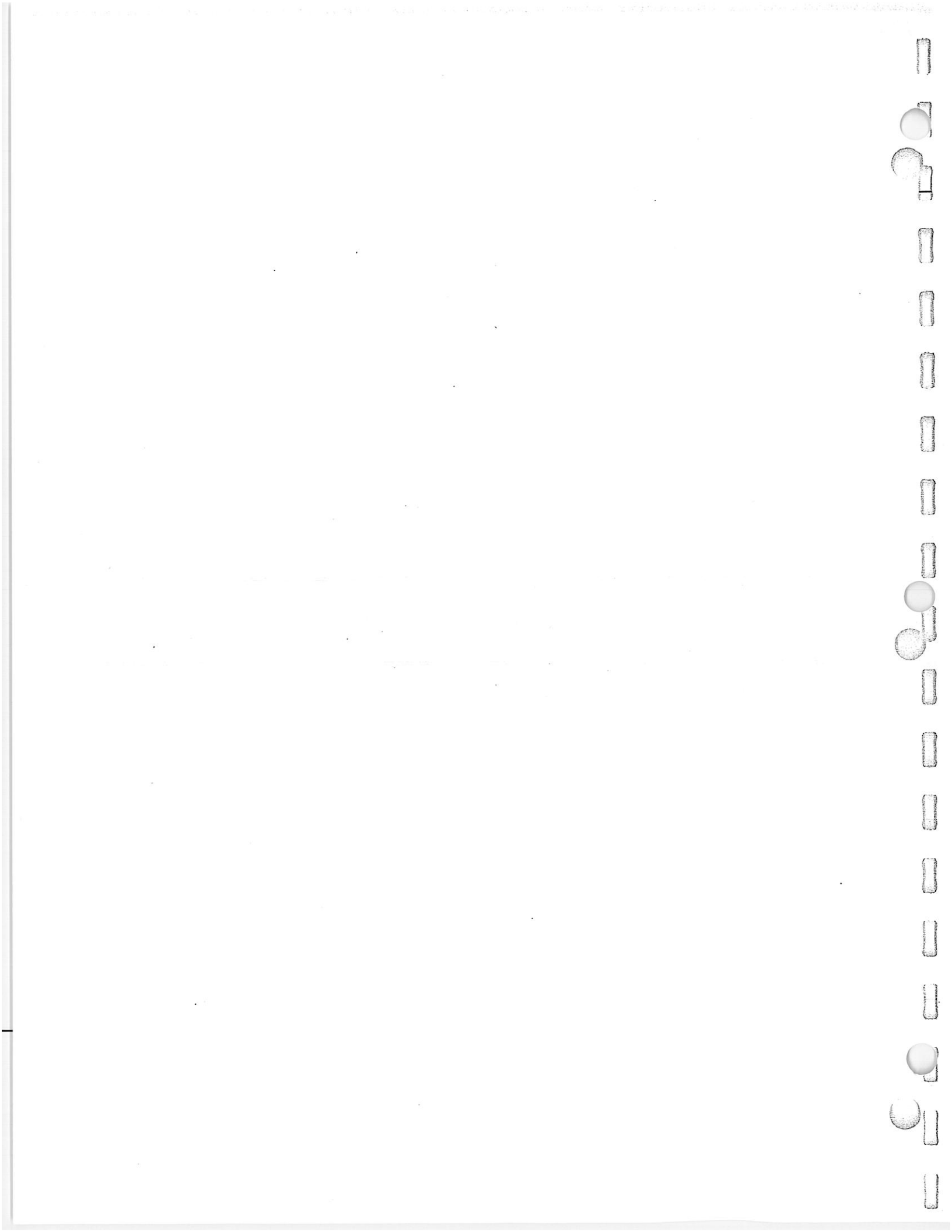
- ✓ *Establish priorities for action with reasonable implementation schedules.*
- ✓ *Function as a basis for land use controls, design standards, and other applicable Township ordinances.*
- ✓ *Provide growth management guidelines.*
- ✓ *Improve traffic routes by coordinating needed improvements within a time frame.*
- ✓ *Encourage improved cooperation between state, county, and local governments.*
- ✓ *Serve as a marketing tool.*
- ✓ *Document recreational needs as well as identify opportunities for improvement.*
- ✓ *Identify and preserve historic resources.*
- ✓ *Establish a common vision of the character of the Township.*

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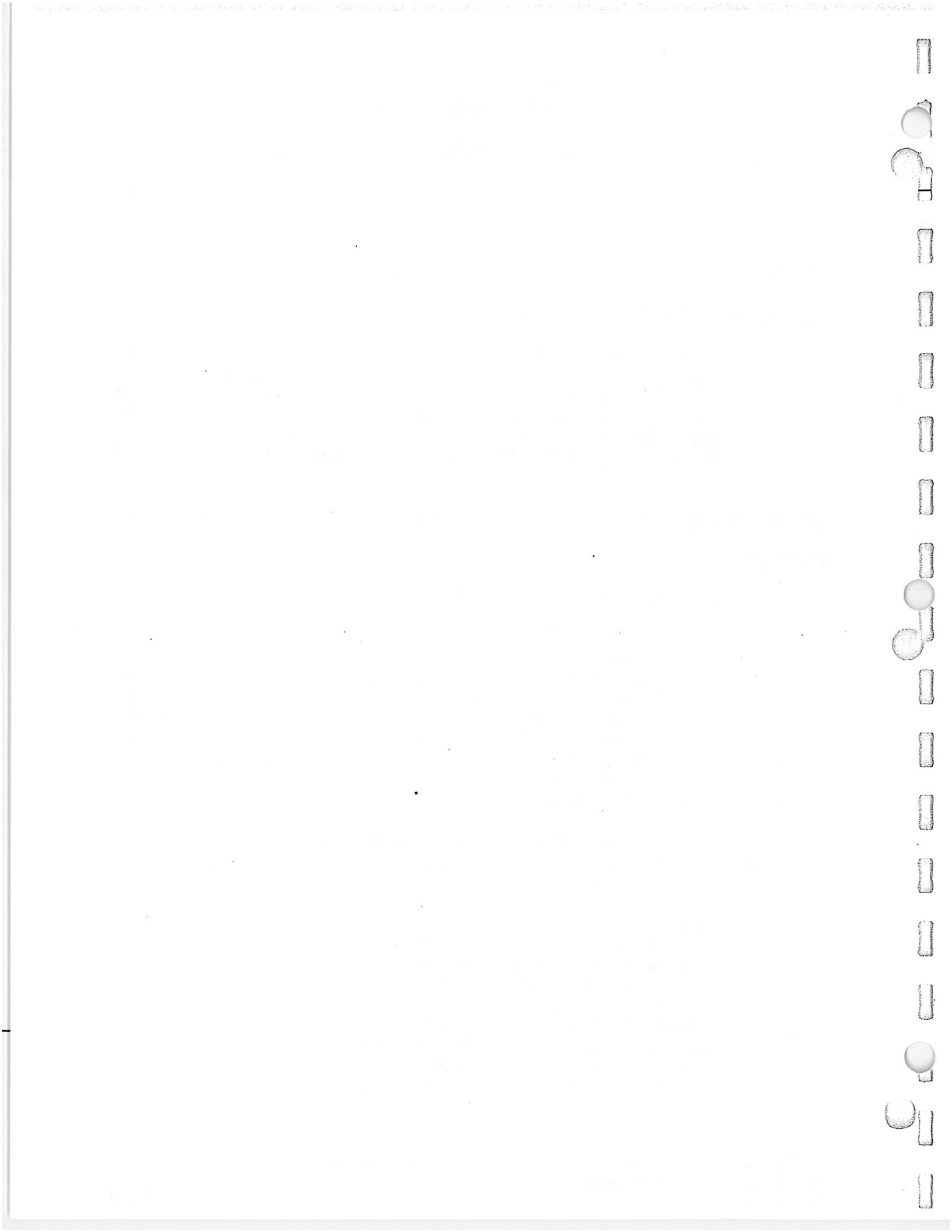
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**TOWNSHIP OF MONAGHAN
COMPREHENSIVE PLAN**

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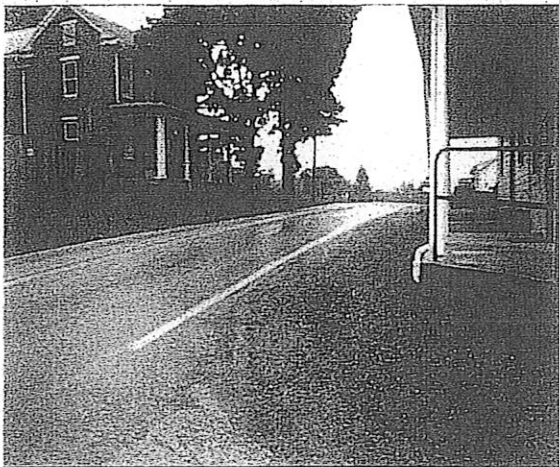


INTRODUCTION



TOWNSHIP OF MONAGHAN
COMPREHENSIVE PLAN
"A STRATEGIC APPROACH"

INTRODUCTION



The Township of Monaghan is located in the northern tier of York County along the banks of the Yellow Breeches Creek. The Township is in close proximity to the City of Harrisburg and several major transportation routes which include U.S. Route 15, Interstate 81 (I-81), and Interstate 83 (I-83).

While being located at the fringe of an urban area, the rural character of the Township has been preserved with almost ninety (90%) percent of the land area remaining in woodland, farmland, orchards or other forms of open space. The dominant housing type is the single-family detached unit which occurs in a dispersed manner throughout the Township with two distinct village pockets located along South York Road (Village of Mt. Pleasant and Village of Siddonsburg). Also, a

large traditional subdivision (Memphord Estates) is located in the northwest quadrant of the Township.

Challenges now facing the Township relate to¹:

- preserving the rural character,
- providing recreation/parks,
- defining a "sense of place",
- ensuring fairness in land use regulations, and
- fostering intermunicipal cooperation (e.g. fire, police, school district).

Recognizing that these issues will have an impact on the quality of life and the future development of Monaghan Township, the Board of Supervisors, on October 9, 1997, commissioned the development of the Comprehensive Plan. In a progressive and proactive manner, the Township Board of Supervisors chose to develop a plan for future land use and municipal decision-making using a "Strategic Planning Approach" which is founded on citizen communication and involvement².

As such, this document has been organized around three (3) main sections to assist the Township in making future policy decisions. They include:

¹A complete listing of issues identified by the Community is contained in Appendix II.

²The Township of Monaghan established a Steering Committee to participate in the development of this plan. The team included membership from the Planning Commission, Board of Supervisors as well as the citizen volunteers.

(1) **Section I - "Creating the Vision"**, which summarizes the key issues and opportunities facing the Township and establishes a vision for the future. Specifically, this section consists of six (6) key elements: (1) summary of strengths and weaknesses; (2) vision statement for the future; (3) community goals; (4) community development objectives; (5) plan for future land use; and (6) review of plan interrelationships.

(2) **Section II - "Strategies for Action"**, which sets forth the policies, strategies and timing for implementation of the Township's vision for the future. Each strategy developed outlines the party responsible for accomplishing the task, the estimated cost of the activities, the priority for implementation as defined by the community, and potential funding sources. A key part in this section is the Action Program which is designed to be reviewed and updated on an annual basis prior to the municipal budgeting process, so that active review and evaluation of priorities becomes a functional part of administration.

(3) **"Situational Profile"**³, which presents a snapshot of background information related to land use, transportation and parks/recreation. Specifically, Appendix I contains relevant background studies from the 1986 Comprehensive Plan, which has been incorporated into this document. Appendix III contains a review of current existing land use, transportation and recreation issues and opportunities.

Figure i provides an overview of the "Strategic Planning Process" and outlines the components which comprise this plan. Table i describes the main principals of planning, the role of the Planning Commission, and how to use the plan after adoption.

³The Situational Profile is contained in Appendix I and Appendix III.

" It is good to have an end to journey towards, but it is the journey that matters in the end."

- Ursula K. Le Guin



Figure i

TOWNSHIP OF MONAGHAN STRATEGIC PLANNING PROCESS

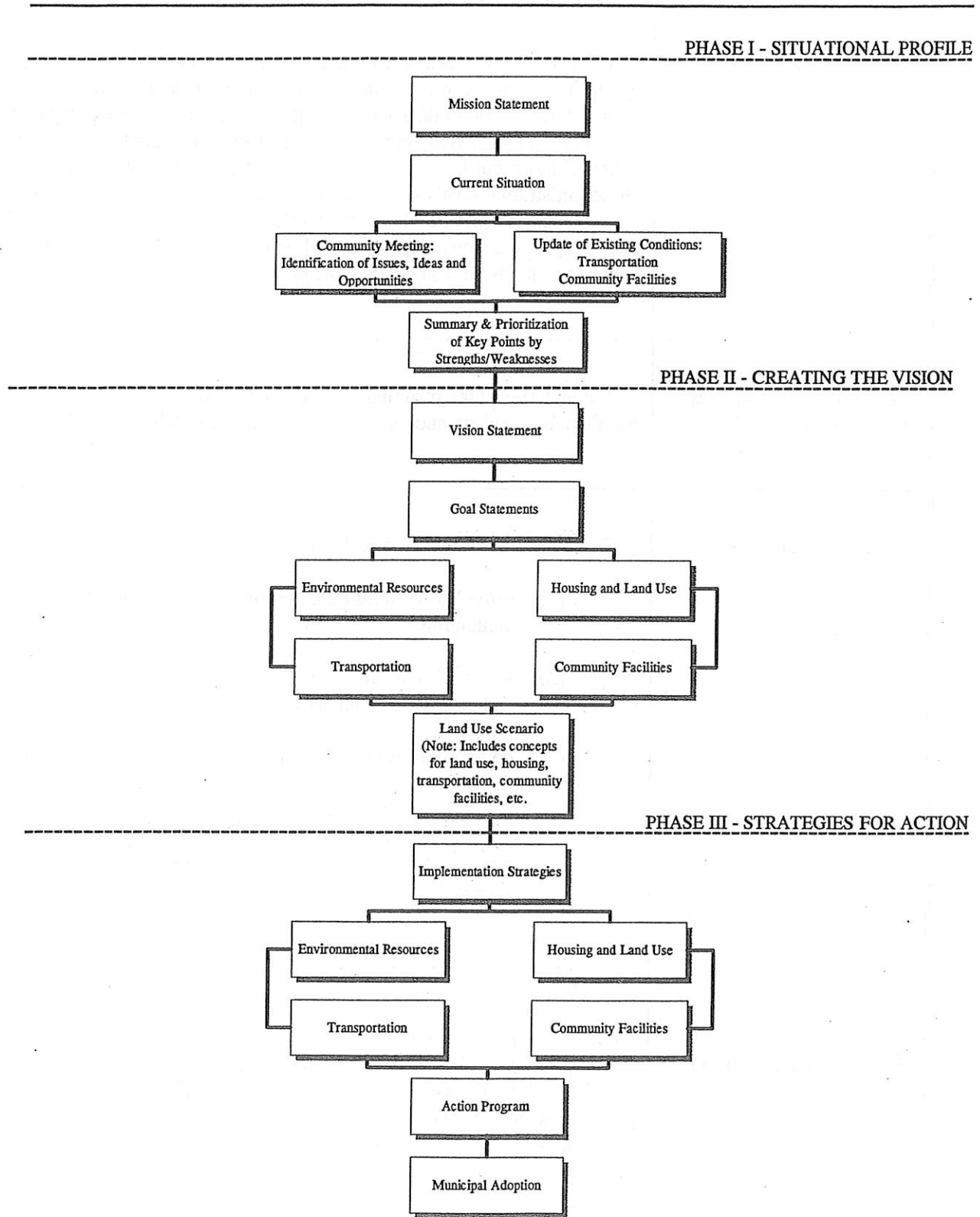
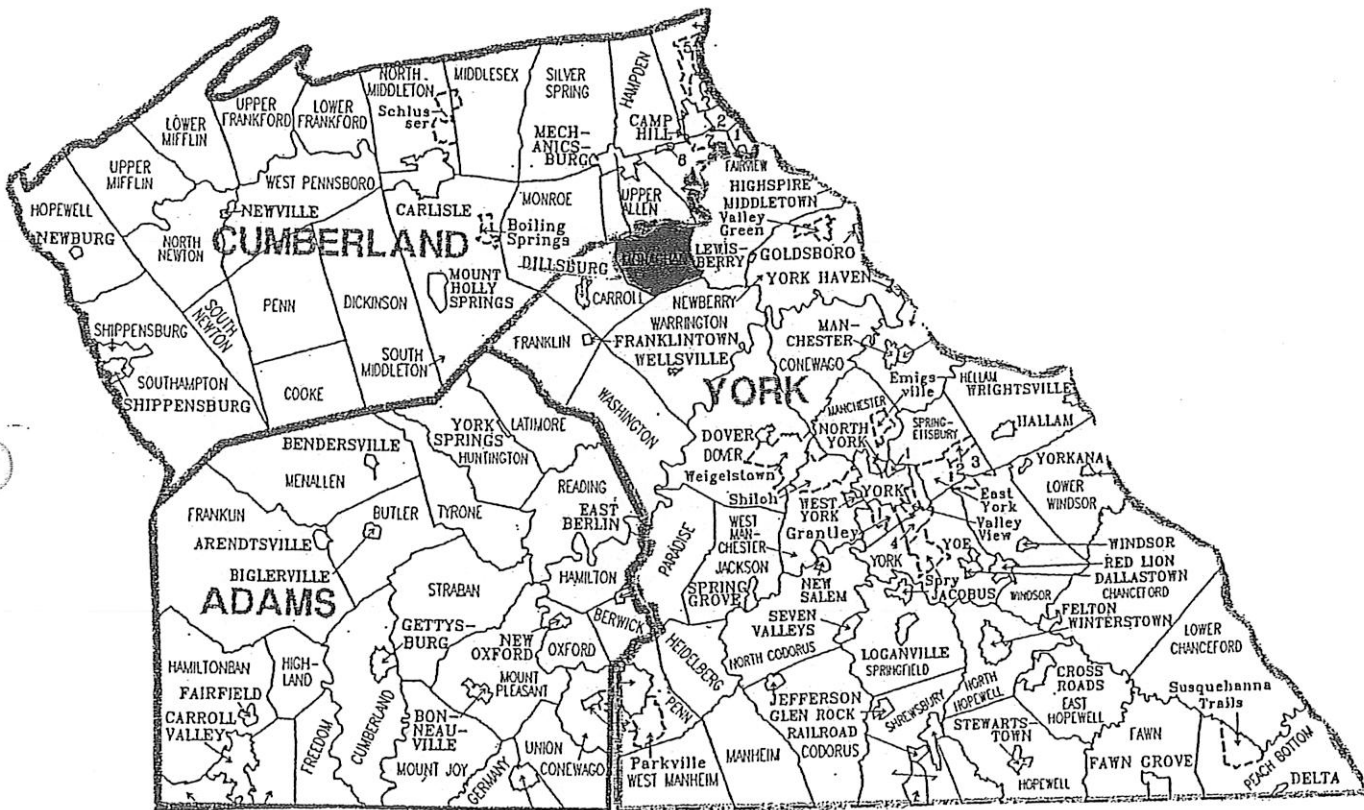


Table i

COMPREHENSIVE PLANNING PROCESS	
<i>What is Planning?</i>	<p>Planning is an organized way to find out what a community's needs and opportunities are, as well as aiming for efficient and effective change. Planning is a guide to decision-making. As a guide, planning requires strict, coordinated action among the Supervisors, Planning Commission, School District, outside agencies and organizations, citizen volunteers and all administrative levels of Municipal government, so that community interests may be served. To be truly effective, the technical aspects of plan preparation must be integrated into the process and must be understood by those who will use the plan.</p>
<i>What are the boundaries of the Planning Area?</i>	<p>The boundaries of the planning area are the boundaries of the Municipality, and are shown on the Location Map, Exhibit i.</p>
<i>What is a Comprehensive Plan?</i>	<p>A Comprehensive Plan is a working guide that</p> <ol style="list-style-type: none"> (1) provides a long-range vision for the future for a community; (2) scans all relevant information about the physical, social, and economic features of a community; (3) develops a consensus about how a community should develop and redevelop; and (4) provides recommendations and initiatives to be put into place to achieve recreation goals and the vision for the future.
<i>How should the Plan be used, and when should it be updated?</i>	<p>Good planning is a continuous cycle, constantly evolving over time to reflect any changes or anticipated changes occurring in a community. This Plan should serve as a basis for decision-making over the next 10 years. However, Section II - "Strategies for Action" should be analyzed and updated each year to reflect all implementation measures and the current needs of the community.</p>

TOWNSHIP OF MONAGHAN LOCATION MAP





SECTION I
CREATING THE VISION



SECTION I CREATING THE VISION

"It is vision that inspires, motivates, and transforms desire into action."

A "vision" is a mental image that empowers individuals and communities by giving them foresight to make events happen and projects possible.

This section provides an overview of the process used to create the "Township of Monaghan's Vision for the Future." The process consisted of six (6) steps: (1) issue identification; (2) creation of a vision statement for the 21st Century; (3) development of community goals; (4) the establishment of community development objectives; (5) the delineation of a future land use scenario; and (6) the relationship of this plan to the surrounding municipalities.

Step 1 - Issue Identification

This step involved the assessment and organization of existing conditions contained in the Situational Profile¹ and the issues and ideas obtained as part of the public participation process². The organization of this information, in the form of strengths and weaknesses, afforded our Community the opportunity to objectively see our assets, liabilities

¹ See Appendices I and III.

² See Appendix II.

and challenges for the future. Noting that the classification of key points by strengths and weaknesses is neither positive nor negative is important. This process is neutral and only shows areas upon which to build, such as preserving rural character, developing fairness in land use regulations, improving municipal relationships and developing a public parks and recreation system.

Table I-1 represents the Township's strengths and weaknesses.

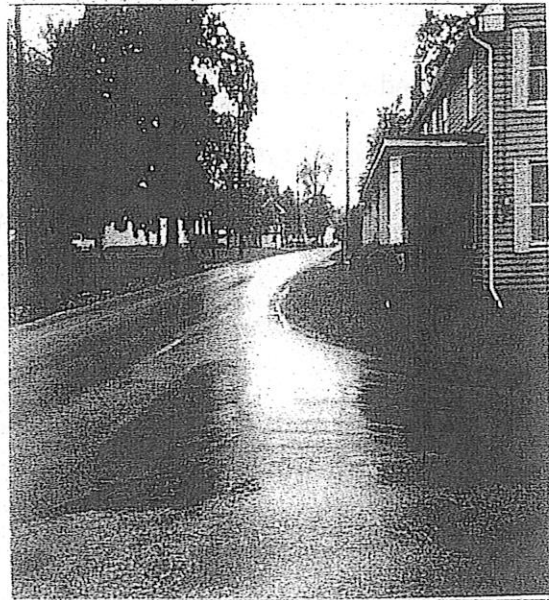


Table I-1

TOWNSHIP OF MONAGHAN STRENGTHS/WEAKNESSES	
Strengths (Assets)	Weaknesses (Challenges)
<ul style="list-style-type: none"> ◦ Good regional access to Harrisburg, York, Philadelphia and Baltimore. ◦ Rural character. ◦ Borrowed open space in great abundance. ◦ Woodlands and rolling topography. ◦ Adequate police/fire protection. ◦ The banner township in York County for apple and peach production. ◦ Good existing housing stock. ◦ Good school system. ◦ Low density development throughout the Township. ◦ Majority of dwelling units are owner-occupied. ◦ Progressive Update of Zoning Ordinance in 1995. ◦ Family and community pride. ◦ Stable population base. ◦ Quality of municipal services good versus level of staffing. ◦ Supportive county staff. 	<ul style="list-style-type: none"> ◦ Limited cultural and economic services. ◦ Diabase geology with poor aquifers. ◦ Slow permeability for On-lot Disposal Systems (OLDS). ◦ No municipal recreation facilities. ◦ Poor soil for rotational crops. ◦ No pedestrian access along roadways. ◦ Limited cartway widths. ◦ No comprehensive park, recreation and open space plan. ◦ Minimal stormwater drainage along roadways. ◦ Poor condition of local road surfaces. ◦ Limited municipal buildings and garage facilities.

**TOWNSHIP OF MONAGHAN
STRENGTHS/WEAKNESSES**

Strengths (Assets)	Weaknesses (Challenges)
<ul style="list-style-type: none"> • Good communication with the public, e.g. Township newsletter and bulletin board. • Good relationship with media. • Access to regional recreation facilities, such as Ski Round Top, Pinchot Lake, City Island and a AA baseball team, the Appalachian Trail, Yellow Breeches Creek, Hershey Park, Williams Grove Park and Speedway, and Lower Allen Township's Lisburn Community Park. • Intermunicipal task force formed in 1998 includes Monaghan Township, Carroll Township, Dillsburg Borough, Wellsville Borough, Warrington Township, Franklin Township, Franklin Town Borough, and Northern York School District. • Numerous unobstructed views. • Business and agricultural communities work well with the Township. • Park and Ride lot on Winding Hill Road. • In the village district conversions from single family residential to apartments are permitted. • Current zoning allows for cluster developments with accompanying open space. 	

**TOWNSHIP OF MONAGHAN
STRENGTHS/WEAKNESSES**

Strengths (Assets)	Weaknesses (Challenges)
<ul style="list-style-type: none"> • Numerous active orchards. • York County currently has a 1998 draft well head protection/water supply plan. • Access to Pennsylvania Turnpike. • Access to Harrisburg International Airport. • Access to numerous institutions of higher education, such as Franklin Marshall, York College, University Center, Dickinson Law School, Widener Law School, Harrisburg Area Community College, Penn State Harrisburg, Shippensburg University, and Messiah College. • Access to Harrisburg metropolitan cultural events. 	

Step 2 - Vision Statement

After the strengths and weaknesses had been established, the next step in creating the vision was the development of a Vision Statement for the future. Figure I-1 presents the Township of Monaghan's vision for the future.

This vision statement incorporates the principal points extracted through the inventory of existing conditions and the various methods of public input and sets the tone and direction for the Comprehensive Plan.

Figure I-1

MONAGHAN TOWNSHIP'S VISION FOR THE 21ST CENTURY

☆☆☆ *The Township of Monaghan is a unique community that has proactively maintained its special rural character, despite its location near regional recreational attractions and access to a roadway system which connects the large urban areas of Harrisburg, York, and Carlisle. The Township supports a landscape of scenic orchards, country-like roads and low density housing that reinforces the local identity and heritage of its residents.*

The people of the Township of Monaghan value their natural passive recreational resources such as the Yellow Breeches Creek and take great pride in their local agricultural economy which continues to be a lead producer in York County. Most importantly, Monaghan Township residents have successfully balanced growth while ensuring that community facilities and services have kept pace with development.

Overall, residents are proud of their strong intergovernmental relationships with surrounding municipalities and their quality of life.☆☆☆

Step 3 - Key Community Goals

The next step in this section was the development of the Community Goals. The community goal statements are broad in nature and are designed to be all encompassing based upon community

identified ideas and issues. Most importantly, goal statements establish in writing what is important to the citizens of the Township of Monaghan. Table I-2 presents the "Key Community Goals."

Table I-2

TOWNSHIP OF MONAGHAN KEY COMMUNITY GOALS	
TOPIC	GOALS
LAND USE/HOUSING	<ul style="list-style-type: none"> • To promote flexibility in land use standards that control the design and location of uses in order to maintain the rural nature of the Township. • To preserve and enhance the strong residential base and mix of housing types. • Ensure fairness in land use controls ordinances • Sustain a proper level of convenient commercial goods and services that serve local residents.
ENVIRONMENTAL RESOURCES	<ul style="list-style-type: none"> • To preserve the green, open spaces in the Township by limiting development through the protection of environmentally sensitive areas and the conservation of woodlands and agricultural resources.
TRANSPORTATION	<ul style="list-style-type: none"> • To upgrade the local road network to increase traffic efficiency and safety. • To encourage improved communication between State, County and Township officials in the enhancement of the Township and regional road network.
COMMUNITY FACILITIES AND SERVICES	<ul style="list-style-type: none"> • To ensure that municipal administration, services and facilities are provided and coordinated in an efficient and effective manner to meet the changing needs of the community. • To increase the availability of local active and passive recreation areas accessible to all residents in strategic locations.

Step 4 - Community Development Objectives

The following community development objectives represent the ideas of the Township of Monaghan and establish a basis for the development of the Future Land Use Scenario which is graphically shown in Exhibit I-1.

A. Land Use/Housing

- Promote development standards which follow strict design and layout guidelines requiring the preservation of open space as well as the incorporation of unique environmental features into site design as a means of preserving the "rural character" of the Township.
- Provide for housing alternatives in compact neighborhoods where it is feasible to provide public utilities.
- Reserve and protect prime agricultural areas wherever possible as a means to enhance rural character and economic potential.
- Encourage the development of small-scale commercial establishments which provide access to local convenience goods and services within the established village area.

B. Environmental Resources

- Continue to implement conservation policies and programs for open space preservation (e.g., clustering techniques).
- Support the development of an open space network which provides buffers and pedestrian access throughout the community for hiking and bicycle paths.
- Capitalize on the Township's access to the Yellow Breeches Creek Corridor.
- Continue to enforce standards to address water runoff and drainage issues.
- Establish relationships with area municipalities (e.g., Lower Allen Township, Upper Allen Township, Carroll Township, Fairview Township, Warrington Township) to

- preserve common natural resources, such as Yellow Breeches.

C. Transportation

- Incrementally upgrade Township roads to meet the current guidelines for the design of local roads and streets prepared by PennDOT where feasible.
- Address intersection conflicts to improve traffic flow within the Township.
- Evaluate potential street interconnections when reviewing subdivision and land development plans.
- Continue to discourage the design of cul-de-sac streets for residential and non-residential streets in order to facilitate traffic movement and access by providing alternate/interconnected routes of travel.
- Coordinate new roads with the existing roadway patterns.
- Support the design of new transportation systems which may ultimately enhance the provision of public transportation.

D. Community Facilities and Services

- Promote land acquisition or land dedication mechanisms for the development of a community park or neighborhood parks.
- Develop public utility systems (water and sewer) within the established Township growth area boundary, as needed.
- Promote the development of both active and passive recreational areas to provide facilities and activities for all age groups.
- Promote, encourage and support intergovernmental cooperation in the provision and operation of recreational facilities and services as well as other capital and service needs.
- Maintain an ongoing awareness of the shifts in population to ensure that public services address the needs of all age groups.

Step 5 - Future Land Use Scenario

This step is organized into three (3) parts. The first part, Part (a), provides an overview of the land use scenario; the second part, Part (b), describes how to effectively use the land use scenario in municipal planning practices; the third part, Part (c), outlines the concepts for enhancing the character of land uses.

The future land use scenario described below and depicted in Exhibit I-1 was developed by synthesizing the information compiled as part of the Situational Profile (*see Appendices I & III*) and the community's vision, goals and community development objectives. This scenario translates the community's development objectives into a spatial graphic or concept plan that will assist the Township in making future development and land use decisions.³

(a) Overview

Overall, the future land use scenario reflects the Township's intent to maintain the current character and quality of life by continuing to preserve the rural lands and open spaces.

(b) Using the Future Land Use Scenario

The future land use scenario is a conceptual guide for establishing policy which regulates land use practices. This "Future Land Use Scenario" is not meant to be a zoning map. For that reason, property lines have not been shown and land use classifications are presented schematically.

³The Comprehensive Planning Steering Committee, staff, residents, volunteers, Planning Commission and the Board of Supervisors developed conceptual ideas for future use as part of the workshop meeting held on September 3, 1998.

A basic idea behind the scenario is to ensure that development fits together in an integrated and harmonious manner while achieving the objectives of Monaghan Township.

Specifically, the scenario provides policy recommendations for developing a wide range of land use planning concepts which include, among others, enhancing local neighborhoods and village nodes and promoting innovative planned development concepts such as open space preservation and clustering. Other concepts include: retaining natural features in development design; managing a compatible mix of land uses; developing publicly owned community and neighborhood park and recreation facilities to serve the existing and future population base; and supporting the local agricultural economy.

This guide will assist the decision-makers and planners of Monaghan Township in updating ordinances for use in reviewing new development plans or plans for reuse, alteration or expansion of a site. Important questions to ask an applicant or developer during plan review include: "How will the proposed development impact an adjacent site? How will adjacent streets and pedestrian connections fit together? How much traffic will be generated? How will stormwater run-off be handled? What effect will this plan have on future development of the area?"

Many times a proposed development will be designed by examination of the site only. It is the responsibility of the municipal planners and decision makers to examine the whole picture and not just that site, and determine the level of continuity and compatibility between the uses. Ultimately, one should ask the question, "Does this development plan fit into the vision, goals and desired land use pattern as stated in this scenario?"

(c) Land Use Character Enhancements

This part describes a variety of land use character enhancements that can be used to achieve the vision of the community. These land use character enhancements directly relate to the information contained in Exhibit I-1 - Future Land Use Scenario Map. It should be noted that this map represents the community's vision of preserving the rural character of the Township; promoting fairness in land use regulations; and continuing to develop community facilities and services.

The following classifications directly relate to the areas shown on Exhibit I-1 and are described as follows:

- *Conservation*
- *Rural Residential*
- *Residential*
- *Village*
- *Commercial*
- *Gateways*
- *Pedestrian Pathways and Open Space linkages*
- *Growth Boundary*

Conservation

This classification, shown in the green stipple pattern on Exhibit I-1, provides for the preservation and protection of the Township's rural lands and natural areas. This area is currently sparsely populated, with single-family residential development scattered among agricultural and wooded lands.

Recommendations

- Continue development in this area as single-family residential at a density of one (1) dwelling unit per three (3) acres or greater.
- Consider these lands a resource to be protected from suburban sprawl.
- Development should be sensitive to environmental constraints such as steep slopes, woodlands, flood plains, wildlife habitat and stream valleys.
- Utilize techniques such as clustering and lot

averaging to preserve open space and reduce the amount of land used for building sites.

- Provide buffers along stream corridors.

Rural Residential

This classification, shown as the yellow area on Exhibit I-1, provides for the continuation of the existing land uses which include single-family dwellings and agricultural uses such as: orchards; nurseries; and agricultural businesses.

Recommendations

- Continue development at a density of one (1) dwelling unit per two (2) acres or greater.
- Apply rural open space design concepts to any future development which encourages clustering or lot averaging to reduce the amount of land area used for building sites.
- Preserve wooded areas and open spaces to act as a buffer between residential areas that may encroach upon active agricultural practices.
- Alert residents to the potential nuisances associated with agricultural/farming practices.

Residential

This classification, shown as the orange area on Exhibit I-1, provides for low to medium density residential development, with consideration being given to open space preservation. The current land use is primarily single-family detached residential.

Recommendations

- Continue to regulate density based upon the availability of public sewer or water service.
- Encourage clustering and lot averaging to help preserve open space and agricultural lands.
- Use buffers and set backs where use conflicts occur to mitigate potential negative impacts between residential and agricultural uses.
- Consider requiring the development of pedestrian pathways in the more density developed areas.

Village

This classification, shown as the purple area on Exhibit I-1, provides for a compatible mix of lower intensity commercial and residential uses. This area is located along North and South York Road and encompasses the villages of Siddonsburg and Mount Pleasant. Mixed uses can be located on the same lot, within the same structure, or on adjacent lots.

Recommendations

- Allow for a range of dwelling types that provide for both commercial and residential uses in the same structure, or conversions between commercial and residential uses.
- Consider managing the number of commercial curb-cuts along North and South York Road.
- Encourage streetscape enhancements such as pedestrian pathways, landscaping and crosswalks.
- Use density bonuses to encourage shared parking and access drives for commercial uses, sign controls, pedestrian pathways and other streetscape enhancements.
- Consider limiting uses to those that do not serve more than five hundred (500) cars per day.⁴ This amount is considered a low volume use by the Pennsylvania Department of Transportation, and will help to prevent congestion.

Commercial

This classification, shown as the red area on Exhibit I-1, provides for commercial/light industrial uses. This area is surrounded by the village area shown on Exhibit I-1, and is located along South York Road and allows higher intensity commercial/light industrial uses.

⁴According to the most current edition of the Institute of Transportation Engineers Trip Generation Manual.

Recommendations

- Provide for the same recommendations as included under the Village area, with the addition of the following items:
- Allow for a variety of commercial and light industrial uses.
- To help keep this area compatible with the surrounding uses, recommended site standards include controlled site access, landscaping, buffering, larger setbacks for more intensive uses. Nuisance performance standards should be considered to eliminate possible conflicts with neighboring uses.

Gateways

These areas provide for arrival and departure points within Monaghan Township. The gateway on North York Road at the edge of the Township clearly demonstrates how a gateway should function. As you pass under the railroad bridge and cross the Yellow Breeches Creek, the landscape changes signifying that you have entered a new area. These access points play an important role in defining perceptions as to the character of the community.

Key points of access and corridors which serve as gateway entrances include:

- North York Road at the northern edge of the Township (Yellow Breeches Creek)
- York Road Corridor
- Intersection of York Road and Siddonsburg Road
- York Road at the Southern Edge of the Township
- East Siddonsburg Road at the Edge of the Township
- North Grantham Road at the northern edge of the Township
- Intersection of South York Road and Ridge Road
- West Siddonsburg Road at the Edge of the Township
- Stony Road at the Edge of the Township

Pedestrian Paths and Open Space Linkages

1. Pedestrian paths are transportation routes designed to facilitate pedestrian or bicycle traffic. Such routes are essential to provide residents, visitors, and people employed within the Township, the opportunity to safely access employment, community facilities (churches and schools), recreation areas, and other places of interest.

Recommendations

- Provide pathways along Yellow Breeches Creek
 - Develop pathways to connect key developed areas and provide a safe area for foot and bicycle traffic⁵.
 - Evaluate the feasibility of using the utility right-of-way which bisects the Township to create an informal pathway.
2. Open space linkages are either developed with a trail or left in their natural state which can follow streams, valleys, ridge lines, and other natural corridors. Open space linkages provide vegetation or woodlands, which offer a visual break within developing communities.

Recommendations

- Incrementally acquire or obtain open space easements along transportation and stream corridors in the Township (reference proposed Future Land Use Scenario).
- A greenway buffer should be provided along the stream corridors. This greenway buffer should be of sufficient width to accommodate passive recreation and pedestrian access.

⁵Reference concepts outlined in the PA Statewide Bicycle and Pedestrian Master Plan contained in Appendix IV.)

Growth Boundary

A growth boundary provides for lands that are appropriate for future urban and suburban development requiring a full range of public services.

The growth boundary area shown on Exhibit I-1 encompasses the majority of land uses in the northwestern quadrant of the Township. This area is most appropriate for development as it is adjacent to the developing areas of Carroll Township and Dillsburg Borough and is either served or anticipated to be served by public water/sewer. The land shown outside the growth boundary is intended to remain primarily rural and open.

Step 6 - Summary of Plan Interrelationships

Plan Elements

A basic principle of a comprehensive plan is the interrelationship of each element. The plan, in order to be effective must function as a process or cycle. As mentioned throughout the document, the goals and development objectives identify community values, needs, and issues, the vision statement sets the tone and direction of the plan, and the strategies for action provide realistic measures for implementation of the plan.

Relationship of the Comprehensive Plan to adjacent municipalities and the York County Comprehensive Plan

Not only does a comprehensive plan build upon itself, it builds upon those plans and ordinances established for the surrounding municipalities.

As stated previously there are four municipalities that define the borders of Monaghan Township. Each of these surrounding municipalities and the York County Comprehensive Plan have been examined in terms of their proposed land uses and use consistency (*contained in their individual comprehensive plans*) along the border of Monaghan Township. It is important to consider the relationship of land uses between adjacent communities when developing a plan for the future land use and governmental land use policies. Planned land uses that are consistent with those in neighboring municipalities can lead to cost effective and mutually beneficial intergovernmental development. The comprehensive plans for the surrounding municipalities and York County have been reviewed and the land uses appear to be consistent with what is proposed for Monaghan Township.

York County

Monaghan Township is located in the Northern portion of York County. The land uses proposed for Monaghan Township appear to be consistent with the County's Comprehensive Plan, which was adopted in 1992, specifically in regards to the Growth Boundary Concept which designates areas appropriate for urban or suburban growth.

Fairview Township

Fairview Township borders Monaghan Township to the East. Fairview's comprehensive plan was adopted in 1993 and proposes that the land which borders Monaghan to be used for agriculture. This use does not appear to conflict with the conservation area proposed within Monaghan Township.

Warrington Township

The proposed land use plan for Warrington Township conforms very closely to the proposed land use for Monaghan Township. Both Townships provide conservation areas along their common border.

Carroll Township

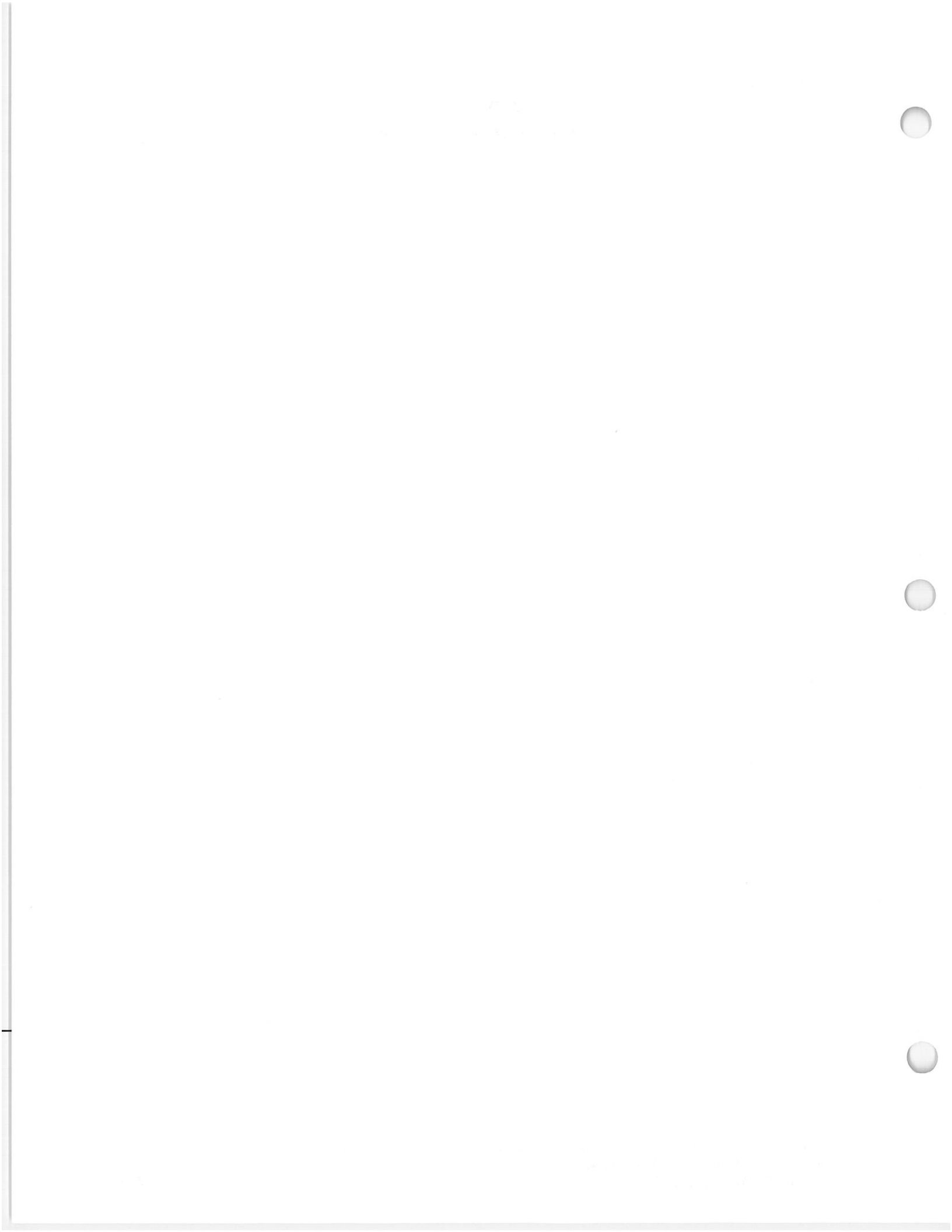
The land use plan for Carroll Township shows the majority of the land adjacent to Monaghan Township is to be used for low density residential, with an area along the southern boundary shown as woodland. This scenario conforms very closely with the future land use plan for Monaghan Township.

Upper Allen Township, Cumberland County

Upper Allen Township borders Monaghan to the north. Upper Allen is currently in the process of updating their comprehensive plan. The Yellow Breeches Creek forms the border between the two townships, and both townships propose that the land adjacent to the Yellow Breeches Creek be preserved as conservation areas.

Exhibit I-1

**TOWNSHIP OF MONAGHAN
FUTURE LAND USE SCENARIO MAP**



SECTION II
STRATEGIES FOR ACTION



SECTION II
STRATEGIES FOR ACTION

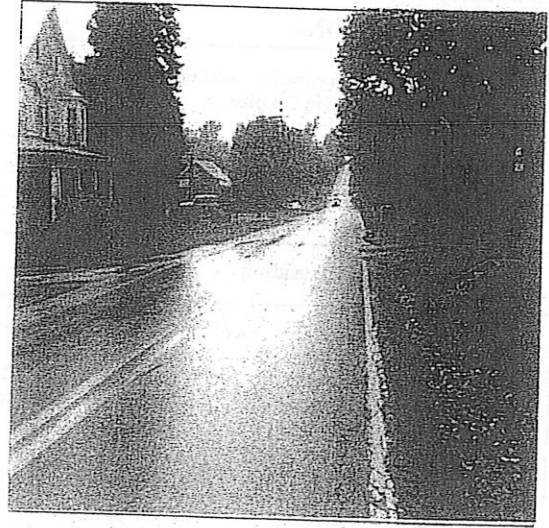
*“People set goals, enjoy striving, and
take pleasure in achievement, contribution
and association.”*

Table II-1 provides a summary of specific action strategies which outline a program for implementation over the next five years. Tables II-2, II-3, II-4, and II-5 provide more detailed matrices which outline categories for strategy priority (high, moderate or low), responsible party, estimated cost and potential funding sources and a space for documenting action taken to implement the strategy. The strategies have been organized by the following topic areas:

- I. Land Use/Housing
- II. Environmental Resources
- III. Transportation
- IV. Community Facilities and Services

These strategies are intended to provide guidance to the decision makers of Monaghan Township and those organizations that are designated to implement portions of this plan. Most importantly, it is the responsibility of all citizens to ensure that their objectives are being met. The implementation of these strategies will depend upon the fiscal and political climate and the level of citizen involvement in any given year. Therefore, it will be essential that the Township review the Action Program strategies and set priorities on an annual basis prior to the Township's budgeting process.

It should be noted that the cost estimates contained herein are wide-ranging and should serve only as a starting point for project evaluation. Detailed costs will need to be developed as a particular project or strategy would be selected for implementation.



The potential funding sources identified offer sources for providing all or partial financing for an action or project. These are not exhaustive and other possible sources should continually be sought. It will be important for the Township to be up-to-date on future funding sources.

Table II-1

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM SUMMARY			
STRATEGIES FOR ACTION	PRIORITY		
	H	M	L
LAND USE/HOUSING			
1. Update the Zoning districts to reflect the goals, objectives, and future land use scenario outlined in this plan.	✓		
2. Update the Subdivision and Land Development Ordinance/Zoning Ordinance to ensure it reflects the goals and objectives of this plan.	✓		
3. Develop lighting standards	✓		
4. Encourage the development of specialty retail establishments within the village zone.			✓
5. Continue to use a checklist for reviewing and evaluating subdivision and land development plans.		✓	
6. Consider developing unique Township informational signs.			✓
7. Support and adopt the York County Growth Boundary Concept.	✓		
8. Strengthen existing intermunicipal working relationships and consider building new partnerships with neighboring municipalities.	✓		
9. Inform residents about the various housing programs, grants and other resources available.			✓
10. Continue to encourage a mix of housing types within the Village District by permitting conversions.		✓	
11. Encourage cluster developments to preserve open space, which are permitted under the current ordinance.		✓	
ENVIRONMENTAL RESOURCES			
1. Collaborate with surrounding municipalities in acquiring land or obtaining easements to create a linear greenway network along the banks of the Yellow Breeches Creek.		✓	
2. Continue to maintain the natural woodlands within the Township.		✓	
3. Continue to address stormwater runoff and erosion issues.	✓		
4. Continue to alert residents and developers to the nuisances related to agricultural practices.	✓		
5. Support York County's 1998 draft well head protection/water supply plan.	✓		
TRANSPORTATION			

Table II-1 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM SUMMARY			
STRATEGIES FOR ACTION	PRIORITY		
	H	M	L
1. Perform a sight distance evaluation.	✓		
2. As needed, consider conducting a Traffic Signal Warrant Analysis.			✓
3. Consider conducting a cartway width analysis on local roads to determine which roads need to be widened.		✓	
4. Manage the number of commercial curb cuts in the village area along South York Road.		✓	
5. Improve coordination with other agencies.		✓	
6. Improve coordination with other Townships by evaluating the impact on Township roads by development in adjacent Townships.	✓		
7. Evaluate and upgrade the Township street standards.		✓	
8. Discuss the potential of developing a system of pedestrian paths throughout the Township.		✓	
9. Discourage the use of cul-de-sacs where through street connections are feasible.		✓	
10. Implement a formal Road Pavement Condition Survey and Maintenance Plan.	✓		
11. Continue to improve stormwater drainage along roadways within the Township.	✓		
COMMUNITY FACILITIES AND SERVICE			
1. Consider developing an "Official Map"			✓
2. Implement a Capital Improvements Program (CIP).		✓	
3. Consider developing a "Comprehensive Recreation, Park and Open Space Plan".		✓	
4. Improve and build upon the existing nonpublic/informal parks and recreational facilities within the Township.		✓	
5. Support a variety of year round recreation programs for citizens of all ages.			✓
6. Develop a new municipal complex.		✓	
7. In conjunction with surrounding municipalities, evaluate the benefits of instituting a "Regional Recreation Commission".		✓	
8. As the Township develops a public system of parks and play areas, it is recommended that the following steps be considered:			
a. Conduct playground and park audits, inspections and maintenance under the direction of a Certified Playground Safety Inspector (CPSI)	✓		

Table II-1 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM SUMMARY			
STRATEGIES FOR ACTION	PRIORITY		
	H	M	L
b. Develop a safety inspection schedule including preseason and routine inspections.	✓		
c. Develop and institute the use of safety inspection check lists for each playground.	✓		
d. Acquire and make available playground inspection tools and equipment.	✓		
e. Send an in-house maintenance/codes enforcement officer to the NRPA National Playground Safety Institute (NPSI) for formal certification.	✓		
9. Consider developing a brochure that highlights all of the points of interest within the Township			✓
10. Develop a "Historic Preservation Plan"		✓	
11. Complete a historic sites inventory within the Township.		✓	
12. Ensure that all new public facilities meet the requirements of the Americans with Disabilities Act (ADA).	✓		
13. Identify additional methods to share Township information with citizens		✓	
14. Evaluate the level of staffing provided to address planning and zoning needs within the Township.		✓	
15. Develop a formal volunteer network		✓	
16. Consider approaching not-for-profit entities to contribute a user fee for public services.		✓	
17. Budget funds to assist the Township officials, Planning Commission members and related boards in attending the PPA Annual Conference and other beneficial planning workshops and seminars.			✓
18. Encourage Planning Commission Members, Zoning Hearing Board Members and future related planning boards to become members of the American Planning Association (APA).		✓	
19. Review and revise this Action Program on an annual basis prior to the Township's annual budgeting process.		✓	
20. Participate in the Pennsylvania Downtown Center (PDC).			✓
21. Support, encourage, and promote neighborhood "self-help activities."		✓	
22. Continue to actively work with York County Planning Commission.	✓		
23. Continue to participate in the Intermunicipal task force.		✓	

Table II-1 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM SUMMARY			
STRATEGIES FOR ACTION	PRIORITY		
	H	M	L
24. Discourage dumping and encourage maintenance of aesthetics by holding periodic municipally-sponsored cleanup days.	✓		

Table II-2

TOWNSHIP OF MONA GHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
LAND USE/HOUSING				
1. Update the Zoning districts to reflect the goals, objectives, and future land use scenario outlined in this plan.	H	Board of Supervisors, Planning Commission	<p>\$8,000 - \$15,000</p> <ul style="list-style-type: none"> DCED State Planning Assistance Grant (SPAG) - Open Door Application DCED Community Revitalization Program General Fund 	
2. Update the Subdivision and Land Development Ordinance to ensure it reflects the goals and objectives of this plan.	H	Board of Supervisors, Planning Commission	<p>\$5,000 - \$10,000</p> <ul style="list-style-type: none"> DCED State Planning Assistance Grant (SPAG) - Open Door Application DCED Community Revitalization Program General Fund 	
3. Develop lighting standards which address levels of illumination and light trespass from buildings (interior & exterior), outdoor lights, and commercial lighting, i.e. gas station or convenience store canopies.	H	Board of Supervisors, Planning Commission	<p>\$1,500 - \$2,000</p> <ul style="list-style-type: none"> DCED State Planning Assistance Grant (SPAG) - Open Door Application DCED Community Revitalization Program General Fund 	
4. Encourage the development of specialty retail within the village zone, by offering incentives such as reduced number of parking spaces required.	L	Board of Supervisors, Planning Commission	<p>N/A</p> <p>See item 1</p>	

Table II-2 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
5. Continue to use a checklist for reviewing and evaluating subdivision and land development plans. This checklist should include all the required information included within the ordinance.	M	Planning Commission	N/A	
6. Consider developing unique Township informational signs. These include street name, directional and locational signs.	L	Secretary/ Treasurer	Project Specific ----- • Fundraising • General Fund • Sponsorship	
7. Support and adopt the York County Growth Boundary Concept. See appendix IX	H	Board of Supervisors	N/A	
8. Strengthen existing intermunicipal working relationships and consider building new partnerships with neighboring municipalities for example: - Parks and recreation programs and services. - Resource and equipment sharing. - Planning and development coordination. - Emergency preparedness. - Transportation planning and improvement coordination.	H	Board of Supervisors	N/A	

Table II-2 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>9. Inform residents about the various housing programs, grants and other resources available through the State and Federal Government to assist residents, in maintaining or purchasing a home such as:</p> <ul style="list-style-type: none"> - Community Development Block Grant Program (CDBG) - Housing and Community Development Program - Single Family Home Ownership Program - Weatherization Program - General Assistance from the Department of Public Welfare - Property Tax or Rent Rebate Program <p>See Appendix V</p>	L	Secretary/ Treasurer	Project Specific	
<p>10. Continue to encourage a mix of housing types within the Village District by permitting conversions from single family residential to apartments.</p>	M	Board of Supervisors, Planning Commission	N/A See Item 1	
<p>11. Encourage cluster developments to preserve open space, which are permitted under the current ordinance.</p>	M	Board of Supervisors, Planning Commission	N/A	

Table II-3

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
ENVIRONMENTAL RESOURCES				
1. Collaborate with surrounding municipalities in acquiring land or obtaining easements to create a linear greenway network along the banks of the Yellow Breeces Creek. The Yellow Breeces Creek currently supports a variety of outdoor recreational activities including canoeing, tubing, fishing, and swimming. A linear open space network would ensure continued access to the creek for residents and future generations.	M	Board of Supervisors, Planning Commission	<p>\$1,500 - \$5,000 (Feasibility Study/Plan) Dependent Upon Specific Path and Type of Pathway/Sidewalk</p> <hr/> <ul style="list-style-type: none"> DCNR Keystone Community Grant Program - Application: Generally two times per year (December and August) PennDOT - Transportation Equity Act for the 21st Century (TEA 21) or Transportation Improvement Program (TIP) General Fund 	
2. Continue efforts to maintain the natural woodlands within the Township. This program should include provisions for:	M	Board of Supervisors, Planning Commission	N/A - Project Specific	
<ul style="list-style-type: none"> Prevention of clear cutting Sustainable harvesting to retain existing stands of trees Tree planting programs 				

Table II-3 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
3. Continue to address stormwater runoff and erosion issues by planting trees, shrubs, and ground cover on steep slopes, constructing ditches along roadways, and fields, or placing riprap along streams and waterways.	H	Board of Supervisors, Planning Commission	Project Specific ----- • Fundraising • General Fund • In-kind Donations and Services	
4. Continue to alert residents and developers to the nuisances related to agricultural practices if they choose to develop in those areas.	H	Board of Supervisors, Planning Commission	N/A	
5. Support York County's 1998 draft well head protection/water supply plan.	H	Board of Supervisors, Planning Commission	N/A	

Table II-4

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
TRANSPORTATION				
<p>1. Perform a sight distance evaluation. Examine existing intersections to determine if sight triangle is available. Redefine requirements in accordance with PennDOT criteria. Remove vegetation or restrict turning movements as required. Recommended intersections for sight distance evaluation include:</p> <ul style="list-style-type: none"> • Dorseys Lane and South Fileys Road • Elicker Road and East Mt. Airy Road • North Fileys Road and West Siddonsburg Road • South Fileys Road and West Siddonsburg Road • South Grantham Road and West Mt. Airy Road • Hall Drive and North Grantham Road • Locust Land and Sawmill Road • Meadow Trail and Manor Drive • Mowery Road and North York Road • Mountain Road and East Mt. Airy Road • South York Road and East Mt. Airy Road • Anderson Town Road and Wharf Road • South York Road and West Ridge Road 	H	Board of Supervisors	<p>Dependent Upon Project</p> <ul style="list-style-type: none"> • PennDOT - Transportation Equity Act for the 21st Century (TEA 21) or Transportation Improvement Program (TIP) • General Fund 	

Table II-4 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>2. As needed consider conducting a Traffic Signal Warrant Analysis. Perform a Traffic Signal Warrant Analyses at several high volume intersections in the Township to determine if there is a need for signalization at those intersections. Intersections that could be considered are:</p> <ul style="list-style-type: none"> - York Road and Siddonsburg Road - West Siddonsburg Road and Fileys Road - East Siddonsburg Road and North Lewisberry Road - Mt. Airy Road and South York Road 	L	Board of Supervisors	<p>Dependent Upon Project</p> <ul style="list-style-type: none"> • PennDOT - Transportation Equity Act for the 21st Century (TEA 21) or Transportation Improvement Program (TIP) • General Fund 	
<p>3. Consider conducting a cartway width analysis on local roads to determine which roads need widened. This process may include acquiring additional right-of-way from adjacent property owners.</p>	M	Board of Supervisors	<p>Dependent Upon Project</p> <ul style="list-style-type: none"> • PennDOT - Transportation Equity Act for the 21st Century (TEA 21) or Transportation Improvement Program (TIP) • General Fund 	
<p>4. Manage the number of commercial curb cuts in the village area along South York Road. This could be done by using incentives in which the number of parking spaces are reduced when access drives, access points, or parking areas are combined. In addition it is recommended that parking areas be located to the side or rear of the main structure and connected through access drives to adjacent commercial uses.</p>	M	Board of Supervisors	<p>\$500 - \$800</p> <ul style="list-style-type: none"> • DCED State Planning Assistance Grant (SPAG) - Open Door Application • General Fund 	

Table II-4 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
5. Improve coordination with other agencies; any desired changes on state and county owned roads should be coordinated with the appropriate agency. Funding sources should be exhausted before relying on Township funds. In some cases, this may require advance planning, i.e. investigating PennDOT's 12-year plan, participation in PennDOT's Agility program may also be beneficial.	M	Board of Supervisors	N/A	
6. Improve coordination with other Townships by evaluating the impact on Township roads by development in adjacent Townships. Traffic studies should be submitted to the Township of Monaghan for impact to Township roads by residential and commercial development in neighboring Townships.	H	Board of Supervisors	N/A	
7. Evaluate and upgrade the Township street standards. Incrementally upgrade Township roads to meet the current guidelines for the design of local roads and streets prepared by PennDOT. Add speed limit signs where currently not posted.	M	Board of Supervisors	Dependent Upon Project • General Fund	

Table II-4 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>8. Discuss the potential of developing a system of pedestrian paths throughout the Township. This can be accomplished by creating trails throughout the Township to connect the various existing and proposed residential, recreational and commercial areas.</p> <p>Areas that could be incorporated in to this pathway system could be:</p> <ul style="list-style-type: none"> • Wooded areas and stream banks along Yellow Breeches Creek • Areas along Pippins Run • Areas along Stoney Run • Utility and right-of-ways <p>See Future Land use map, Exhibit I-1</p>	M	Board of Supervisors	<p>\$1,500 - \$5,000 (Feasibility Study/Plan) Dependent Upon Specific Path and Type of Pathway/Sidewalk</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • DCNR Keystone Community Grant Program - Application: Generally two times per year (December and August) • PennDOT - Transportation Equity Act for the 21st Century (TEA 21) or Transportation Improvement Program (TIP) • General Fund 	
<p>9. Discourage the use of cul-de-sacs where through street connections are feasible. The design of through streets lessens the demand on key intersections and provides alternate routes of travel. This also allows for detours in the event a roadway is blocked. As new developments and subdivisions occur, it is recommended that the Planning Commission and Board of Supervisors look for street interconnections with other existing, new, and proposed streets.</p>	M	Board of Supervisors	N/A	

Table II-4 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>10. Implement a formal Road Pavement Condition Survey and Maintenance Plan. Consider undertaking the following steps:</p> <ul style="list-style-type: none"> a. Pavement Conditions Survey and Evaluation. b. Pavement Ratings and Weight Factors. c. Repair and Maintenance Strategies. <p>This program is a core element of a roadway management system and provides the basis for:</p> <ul style="list-style-type: none"> - Prioritizing road repairs. - Setting capital improvement budget limits. - Communications to the public the Township's plans for road work on an objective (non-biased) basis. 	H	Board of Supervisors	<p>Cost Dependent Upon the Number of Miles of Township Roads</p> <p>-----</p> <ul style="list-style-type: none"> • General Fund • Liquid Fuels Fund 	
<p>11. Continue to Improve stormwater drainage along roadways within the Township by installing drainage swales, gravel lined ditches, catch basins, gravel sumps or by improving the profile of the roadway by crowning, or grading.</p>	H	Board of Supervisors	<p>Dependent Upon Project</p> <p>-----</p> <ul style="list-style-type: none"> • General Fund 	

Table II-5

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
COMMUNITY FACILITIES AND SERVICES				
<p>1. Consider developing an "Official Map" which is a process to designate and acquire future neighborhood/community/regional park sites or to undertake other public works projects (such as road extensions, connections, etc.).</p> <p>The official map establishes up-front the Township's long-range goals for parks, roads, and other public facilities.</p> <p>This process would allow the Township to reserve important land without immediate purchase, thereby giving the Township time to set aside funds for land acquisitions.</p> <p>Consider undertaking the following steps:</p> <ol style="list-style-type: none"> Draft an official map and ordinance in accordance with the provisions outlined in Section 401 of the Municipalities Planning Code (MPC) (see Appendix VI). Forward to Planning Commission, County and adjacent municipalities for review and comment. Conduct a public meeting. 	L	Board of Supervisors	<p>\$10,000 - \$15,000</p> <p>-----</p> <ul style="list-style-type: none"> General Fund 	
<p>2. Implement a Capital Improvements Program (CIP).</p> <p>The CIP would cover, among others, capital expenditures for transportation improvements, stormwater management facilities, recreation, and large equipment purchases.</p>	M	Secretary/Treasurer	In-House	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>2.(Continued)</p> <p>Due to the many demands on infrastructure (roads, water and sewer), recreation and emergency services, the Township should consider using a Capital Improvements Program (CIP) that would assist in financial management as well as assessing the community facility needs.</p> <p>A CIP would help prioritize the Township agenda for providing public services and provide a means for financing such improvements.</p> <p>A Capital Improvement Program is based on a multi-year scheduling of public physical improvements and capital purchases. The scheduling is based on fiscal resources available and the choice of improvements to be constructed or other capital expenditures over a five or six year period.</p> <p>A capital budget would be developed as part of the program and would refer to those improvements or expenditures that are scheduled for the next fiscal year. Each year, the Township would reevaluate the direction and needs of the municipality and either continue as planned, or change priorities and reschedule projects. Examples of capital projects include streets, sewer lines, emergency equipment, and park and recreational facilities.</p>				

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>2. (Continued)</p> <p>A capital budget would be developed as part of the program and would refer to those improvements or expenditures that are scheduled for the next fiscal year. Each year, the Township would reevaluate the direction and needs of the municipality and either continue as planned, or change priorities and reschedule projects. Examples of capital projects include streets, sewer lines, emergency equipment, and park and recreational facilities.</p> <p>The use of a Capital Improvement Program can provide many benefits to the Township of Monaghan including:</p> <ul style="list-style-type: none"> - Security that plans for community facilities are carried out - Better scheduling of public improvements that take longer than one year to construct - Can provide an opportunity to purchase lands before costs increase - Stabilization of tax rates through careful debt management - Avoiding mismanagement conflicts such as paving a street one year and tearing it up the next year to build a sewer - Public participation in the decision-making process - Better overall management of municipal affairs 				

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
3. Consider developing a "Comprehensive Recreation, Park and Open Space Plan".	M	Board of Supervisors, Planning Commission	\$25,000 - \$35,000 ----- • DCNR Keystone Grant Program • General Fund	
4. Improve and build upon the existing nonpublic/informal parks and recreational facilities within the Township while aggressively acquiring future sites as a means to meet the needs of Township residents. The National Recreation and Parks Association (NRPA) recommends approximately ten (10) acres of park land for every one thousand (1000) people. According to that figure the Township of Monaghan should have a core system of park land of twenty (20) acres. Of these ten (10) acres, 1.5 - 2.25 acres per one thousand acres (1000) people should be in the form of neighborhood parks serving populations within ¼ to ½ mile radius. Currently the Township has no publicly owned parkland. As residential development continues in the community, it is likely that the demand for recreational amenities will increase. The Township should consider the institution of a land dedication/fee-in-lieu of requirement in the Subdivision and Land Development Ordinance.	M	Board of Supervisors	See item 2 under Land Use/Housing	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/ POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
5. Support a variety of year round recreation programs for citizens of all ages. These activities could include formal organized activities such as sporting events or community plays and concerts, or informal activities such as nature walks, story time for children, trips to cultural events, or social gatherings.	L	Volunteers	N/A	
6. Develop a new municipal complex that would serve as a focal point for the community. This municipal complex would also provide additional office and storage areas for the municipal employees.	M	Board of Supervisors	Project Specific ----- • General Fund	
7. In conjunction with surrounding municipalities, evaluate the benefits of instituting a "Regional Recreation Commission" to provide recreational programming support to member municipalities. This could be done in conjunction with the Department of Community and Economic Development (DCED) Circuit rider program, so that costs could be shared.	M	Board of Supervisors	N/A	
8. As the Township develops a public system of parks and play areas, it is recommended that the following steps be considered: a. Conduct playground and park audits, inspections and maintenance under the direction of a Certified Playground Safety Inspector (CPSI), and meet Consumer Product Safety Commission (CPSC) and American Society for Testing and Materials (ASTM) standards. b. Develop a safety inspection schedule including pre-season and routine inspections.	H	Board of Supervisors	\$300 - \$500 per park ----- • General Fund	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>8. (Continued)</p> <p>c. Develop and institute the use of safety inspection check lists for each playground. At a minimum, the check list should inspect for the following:</p> <ul style="list-style-type: none"> - Improper protective surfacing; - Inadequate fall zones; - Protrusion and entanglement hazards; - Entrapment in openings; - Insufficient equipment spacing; - Trip hazards; - Lack of supervision; - Age-inappropriate activities; - Lack of maintenance; - Pinch, crush, shearing, and sharp edge hazards; - Platforms with no guardrails; and - Equipment not recommended for public playgrounds. <p>Such equipment includes heavy swings such as animal figure swings and multiple occupant/glider type swings; free swinging ropes; and swinging exercise rings and trapeze bars (both are considered athletic equipment and nor recommended for public playgrounds).</p> <p>Reference Appendix VII - The National Recreation & Park Association (NRPA) and National Playground Safety Institute (NPSI) flyer which outlines the twelve (12) leading causes of injury on playgrounds. The flyer is entitled: <i>The Dirty Dozen - Are they hiding in your child's playground?</i></p>				

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
9. Consider developing a brochure/community map that highlights all of the points of interest within the Township such as; parks and recreation facilities, historic structures, natural areas, and the significant features.	L	Secretary/Treasurer	Project Specific ----- • General Fund • In-kind volunteer services	
10. Develop a "Historic Preservation Plan" to help preserve historic houses, barns, churches, cemeteries and other features, specifically the historically significant buildings. This plan helps to identify the Township's goals, policies and procedures regarding it's historic resources.	M	Board of Supervisors	\$5,000-\$10,000 (Dependent upon Project Scope) ----- • PHMC • General Fund	
11. Complete a historic sites inventory within the Township to identify structures that could be placed on the National Register of Historic Places. This could be accomplished through the use of graduate school interns and coordination with the Pennsylvania Historic and Museum Commission (PHMC).	M	Heritage Committee	\$3,000 - \$5,000 (Dependent upon Project Scope) ----- • PHMC • General Fund	
12. Ensure that all new public facilities meet the requirements of the Americans with Disabilities Act (ADA).	H	Board of Supervisors	N/A	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
13. Identify additional methods to share Township information with citizens such as: <ul style="list-style-type: none"> - a home-Page on the Internet - news releases - the development of a welcome packet - continuation of the Township newsletter 	M	Secretary/Treasurer	N/A	
14. Evaluate the level of staffing provided to address planning and zoning needs within the Township. Conduct an operational audit of the codes enforcement department in order to assess staffing, etc.	M	Board of Supervisors	N/A	
15. Develop a formal volunteer network so that efforts to improve or help the community can be coordinated through a single source.	M	Secretary/Treasurer	N/A	
16. Consider approaching not-for-profit entities to contribute a user fee for public services afforded by the Township in order to supplement the loss to the Township's tax base.	M	Board of Supervisors	N/A	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>17. Budget funds to assist the Township officials, Planning Commission members and related boards in attending the PPA Annual Conference and other beneficial planning workshops and seminars.</p> <p>The Planning Commission should consider designating one member with the responsibility for keeping the Planning Commission and Board of Supervisors current on what is available in terms of educational seminars, grant programs, workshops, etc.; Department of Environmental Protection (DEP); Department of Conservation and Natural Resources (DCNR); and the Department of Community and Economic Development (DCED). Each of these agencies either offer or sponsor educational seminars and courses on planning and related topics.</p> <p>In addition, DCED publishes a series of planning and related booklets which provide guidance on planning subjects ranging from the role of the Planning Commission, Zoning Hearing Board, Zoning, Subdivision and Land Development, etc.</p>	L	Board of Supervisors	<p>N/A</p> <p>Dependent on the amount of participation</p> <ul style="list-style-type: none"> General Fund 	
<p>18. Encourage Planning Commission Members, Zoning Hearing Board Members and future related planning boards to become members of the American Planning Association (APA).</p> <p>This membership automatically includes membership in the Pennsylvania Planning Association (PPA). Members in the Township would be a part of the Central Section which holds local meetings and sends out a newsletter. The main membership also includes a subscription to Planning Magazine and offers other sub-memberships based upon an individual's area of interest.</p>	M	Board of Supervisors	\$50 per person	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>19. Review and revise this Action Program on an annual basis prior to the Township's annual budgeting process.</p> <p>The annual review and update of the Action Program will allow the Township to (1) monitor its performance in implementing the adopted plan; and (2) review changes in development characteristics and make revisions as needed. The Township should consider establishing a Steering Committee comprised of two members of the Planning Commission, Comprehensive Plan Committee representation, and members of the Board of Supervisors. <i>(Note: As other boards and authorities and other organized groups in the Township are formed that have a stake in the plan, they should have a representative on the committee.)</i> This committee should meet at least quarterly to assess the progress of the plan, assign tasks to be accomplished, and report back to their respective Boards. <i>(Note: Committee size should not exceed a membership of twelve.)</i></p> <p>Annually, the committee should reevaluate the direction and needs of the community and either continue as planned, or change priorities and reschedule projects. As such, it is vitally important that the committee and its member boards retain close communications to ensure a coordinated approach to economic, commercial, residential, recreational, and other public facilities development.</p> <p>The commitment of the Board of Supervisors, the Planning Commission, and all other interests is critical to the success of the plan.</p>	M	Board of Supervisors	In-house	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>20. Participate in the Pennsylvania Downtown Center (PDC).</p> <p>The Township should consider joining the PA Downtown Center which provides support to municipalities and downtown organizations. The PDC's mission is to help communities through the "downtown improvement process". Support includes on-site technical assistance ranging from budgeting assistance for events, promotions, and downtown marketing. In addition, the PDC provides business features, co-sponsored events and advocacy for issues such as tourism, etc.</p> <p>Services include:</p> <ul style="list-style-type: none"> - Library and Information Exchange. - Speaker Bureau. - Training Programs. - Meetings and Exchange Opportunities. - Resume Exchange. - Monitoring of Legislation. - Technical Assistance. - Telephone Consultation. - PA Downtown Center Newsletter. - The Collection - Provides articles and news relating to downtown revitalization programs. <p>Annual cost is \$100.00 for an active membership. For further information contact: PA Downtown Center, 1230 North Third Street, Harrisburg, PA 17102-2020 (717) 233-4675 - FAX (717) 233-4690.</p>	L	Board of Supervisors, Secretary/Treasurer	<p>\$100 subscription and membership</p> <hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> • General Fund 	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM				
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN
<p>21. Support, encourage, and promote neighborhood "self-help activities."</p> <p>Community self-help activities might include:</p> <ul style="list-style-type: none"> a. Formalized community policing and Neighborhood Crime Watch groups formed to keep crime under control; b. Garden Clubs charged with maintaining common areas and planting shrubs and flowers around intersections, parks, etc.; c. Fundraising campaigns to develop gateway signs, landscaping and other beautification projects; d. Neighborhood contests for the best flower beds, best decorated outside Christmas tree, most original hand-made decorative flag, etc.; and e. Neighborhood yard sales and barbecues to promote community association and ultimately for fundraising efforts. <p>The Township could show support of these activities by offering space in the Township newsletter, meeting room space, mailings, copying, making public announcements, and providing seed money for approved projects, etc.</p> <p>Seed money could be distributed by offering a cash match for community contributions of volunteer time for approved neighborhood projects. The Board of Supervisors could annually budget funds to be used for such projects.</p>	M	Board of Supervisors	<p>Project Specific</p> <ul style="list-style-type: none"> • General Fund • In-kind volunteer services. 	

Table II-5 (Cont'd.)

TOWNSHIP OF MONAGHAN COMPREHENSIVE PLAN ACTION PROGRAM					
STRATEGIES FOR ACTION	PRIORITY HIGH, MODERATE, LOW (H, M, L)	RESPONSIBLE PARTY	ESTIMATED COST/POTENTIAL FUNDING SOURCES	RECORD OF ACTION TAKEN	
22. Continue to actively work with York County Planning Commission.	H	Board of Supervisors, Planning Commission, Secretary/Treasurer	N/A		
23. Continue to participate in the Intermunicipal task force with Carroll Township, Dillsburg Borough, Wellsville Borough, Warrington Township, Franklin Township, Franklinton Borough, and Northern York School District.	M	Board of Supervisors	N/A		
24. Discourage dumping and encourage maintenance of aesthetics by holding periodic municipally-sponsored cleanup days.	H	Board of Supervisors	N/A		

APPENDIX I

Background Data (1986)

This data was abstracted from the Monaghan Township Comprehensive Plan adopted on December 29, 1986 by the Board of Supervisors. The plan was prepared by the Township Planning Commission in conjunction with the staff of the York County Planning Commission.



1901

1901

APPENDIX I

BACKGROUND DATA (1986)

HISTORICAL SETTING

The Township of Monaghan, as originally laid out in 1745, extended across the entire northwestern section of York County. It then embraced the areas of the present townships of Monaghan, Carroll, and Franklin. The settlers of this region were largely Scotch-Irish, a kind of overflow of the migration of these nationalities into the Cumberland Valley which began in 1735. Some of them came from the Township of Monaghan, in the County of Ulster, and for that reason the name of Monaghan was given to this Township which was laid out by authority of the court at Lancaster four years before York County was organized. For a period of sixty-four years, Monaghan retained its original boundaries until 1809, when the western portion along the South Mountain was established as the Township of Franklin. In 1831, Carroll Township was formed out of the western part of Monaghan and the eastern part of Franklin. This division made Monaghan one of the smallest townships in the County.

Among the first settlers in the present area of Monaghan, coming either from England or Ireland, were the McMullins, Dares, Baileys, Parks, and Elliots. Later some German families came to this region among whom were the Myerses, Kimmels, Hartmans, Shaffers, Fortneys, and Brennemans.

Lime was used as a fertilizer in this Township from the early part of the last century. At first, it was hauled from kilns in Cumberland County. The

first kilns in Monaghan were erected on the farm later owned by G. D. Shaffer. A kiln was built on the McMullen farm about the same time.

From the year 1800 until 1850, considerable whiskey was distilled from corn and rye grown in Monaghan Township. Establishments of this kind existed for many years on the Bailey, Rice, Fortney, Williams, Smith, Coover, Myers and Cannon farms. A distillery for making apple and peach brandy stood for many years on the Cocklin farm.

Monaghan is the banner township in York County for growing apple and peach trees, which have been known to bear an abundant crop since the earliest recollection of the oldest inhabitants. Since 1870, the cultivation of small fruits such as the raspberry, strawberry, blackberry and the grape has been a very profitable business and has occupied the attention of nearly all the farmers in the Township. As early as 1884, the statistics show that 73,000 quarts or over 2,280 bushels of strawberries; 39,900 quarts or over 1,546 bushels of raspberries; 3,000 quarts of blackberries; and about seven tons of grapes were marketed yearly from this Township.

The sawmills of P. Laucks, near Bowmansdale; Levi Lantz, on the Yellow Breeches; and L. T. Fortney on a small stream, a short distance southwest of Mount Pleasant, sawed a great deal of the local timber into lumber for home use.

Iron ore was discovered and successfully mined on property that was originally owned by Daniels Landis. This property was later owned by Mrs. Mary Knisely. The mined ore was hauled to Harrisburg on wagons for a few years, and after that to Shiremanstown, and the ore was shipped over the Cumberland Valley Railroad. The ore was mined from the mid-1800's to 1890.

The Lutheran and Reformed Church known as "Filey's Church" was named in honor of the person who donated the ground. This church was organized about 1800. The first building was of logs and served as a school and church. It had two rows of desks along the side walls facing the center desks. The pulpit was a concavo-convex, or like a goblet cut through the center, it being usually called the "bird cage".

In 1838, it was thought advisable to erect a brick church building of modern architecture. The members of both denominations elected a building committee, two of each denomination, to erect a union church. The cornerstone was laid August 20, 1838, and the church was dedicated the same year.

The Church of God at Andersontown was organized about 1830. Reverend John Winebrenner, the founder of this denomination, was originally a clergyman in the German Reformed Church. Prior to 1848, the services were held in the schoolhouse. During that year, a new frame church was built. In 1871, the building was encased in brick.

Mount Pleasant Bethel was organized in 1843, in an old building opposite the hotel later kept by W. K. Burns in Siddonsburg, by members principally of the church at Andersontown. Thomas Kerr donated a small tract of ground, and in 1844 a frame meeting house was built at a cost of about \$500. In 1850, a brick church called Mount Pleasant Bethel was built in the upper end of

Siddonsburg, at a cost of \$2,300. In 1882, the building was remodeled at an expense of \$1,100.

Benjamin Siddon and William Divin conceived the idea of founding a town in 1825, and it, Siddonsburg, was named after Benjamin Sidden. James G. Frazer was the first postmaster, being appointed in 1826. A pottery existed in Siddonsburg for many years. It was originally started on a farm owned by Jacob Cocklin. Moore and Bushey began to manufacture coaches, buggies and sleighs on an extensive scale at Siddonsburg. This establishment was later owned by Jacob Moore, son of John Moore of Fairview Township, who served as an Associate Judge of the Courts of York County.

Andersontown was named in honor of Rennox Anderson, who built the first house in the area. A post office was established at this place about 1875, and Jacob A. Sultzberger was the first postmaster and also owned a general store. Most of the inhabitants in this area were engaged in the cultivation of grapes, raspberries, and strawberries, which found a ready market in Harrisburg.

REGIONAL SETTING

Development in the Township has been and will be influenced greatly by Monaghan's geographic location. The types of services provided within the Township are also predominantly determined by location, and are an expression of either the influence the Township exerts on its neighbors or the dependence of the Township on larger urban settlements. In order to determine what types of development may be expected and what services may be necessary in the future, it is imperative that the present exchange of services in the Harrisburg-York Region and the larger Philadelphia-Baltimore Region be understood.

The Township is located close to the Great Valley, a major natural transportation corridor. This valley is a continuation of the Shenandoah Valley in Virginia and is known in Pennsylvania as the Cumberland, Lebanon, and Lehigh Valley. The valley parallels the mountains to the north and west and has been a major area of settlement in the past, especially where transportation routes have traversed the valley. One such route to the north is the Susquehanna River Valley. Interstate 83 provides an even better route to the south. Another manmade route, the Pennsylvania Turnpike, provides excellent access east and west and is a focus of development in the Great Valley. U.S. Route 15 serves as a direct accessway to Harrisburg and is most likely the most heavily used transportation corridor by Monaghan Township residents. State Route 114 provides important access to the east. Fairview Township, which contains the Capital City Airport, the New Cumberland Army Depot (a large area employer), the Pennsylvania Turnpike, and Interstate 83, lies directly to the east of Monaghan Township. Finally, Interstate 81 provides an improved route for northeast-southeast movement.

Since Monaghan Township is situated near the main route between Harrisburg and York, residents look to both cities for cultural, economic, and political services not available in the Township. Harrisburg, because of its proximity, is the dominant community and has the greater influence on the Township. York, however, is the County Seat and will maintain its role as a political attraction for Monaghan.

The distance from the major transportation corridors has helped to preserve the Township's rural character. However, the large amount of land that has yet to be developed in the Township and its proximity to neighboring townships that have experienced urban growth label the Township as an area where urban expansion may be expected to

occur in the near future if not managed appropriately.

NATURAL FEATURES

Geology is, in a sense, the history of how present-day natural features were formed. Today's hills, valleys and soils and the underlying bedrock are the product of millions of years of geologic processes. An understanding of the geology of Monaghan Township, particularly its bedrock formations, is helpful in analyzing past and planning future development. For example, the bedrock directly affects construction costs of roads and buildings, and is a key factor in water supply and sewage disposal.

The oldest rock formations in York County are perhaps one billion years old. There was volcanic activity at that time, and lavas poured out on a floor of even older rock. Later, during the segments of time geologists called the Cambrian and Ordovician periods (600 million to 440 million years ago), the region was lowered and became covered with an arm of the sea. Marine sediments deposited on the seabed later hardened into various kinds of rock. The phyllite, quartzite and slate of central and southern York County were formed in this manner, as was the limestone from which the York-Hanover and Cumberland Valleys were carved.

Stretching across the northern part of York County from southwest to northeast are the youngest rocks of the region. They were formed 180 to 220 million years ago during the Triassic period, when Monaghan Township was part of a lowland. Carrying sediments from the slopes of the huge, newly-formed Appalachian Mountains, streams laid down their deposits until the resulting formation reached a thickness of thousands of feet. While this process occurred, the older rocks that formed the floor of the lowland were gradually

sinking, tilting downward towards the northwest. Finally, the floor of rock broke, and through the resulting fault came molten rock (diabase). It flowed through cracks and layers of the new sedimentary rock, baking and hardening some of the shale and sandstone with its heat.

The geology map (see Comprehensive Plan of 1986) shows the makeup of Monaghan Township's bedrock. A portion of the rock is red shale and sandstone, a combination referred to as Gettysburg shale. Most of this type of bedrock lies in the northern half of the Township. One kind of Gettysburg shale, called Heidlersburg member, contains numerous harder gray arkosic sandstones that are interbedded with redbeds. This type of bedrock is restricted to the southwestern part of Monaghan Township.

A band of diabase crosses the Township from the southeastern corner to the northwestern corner. Diabase is more resistant to erosion than other neighboring redbeds and, therefore, tends to form the higher hills and ridges within the Township. Between the crossing band of diabase and the Gettysburg shales are narrow regions of limestone conglomerate. In this area, shale and sandstone have been hardened by metamorphism.

Of all the natural features, soils are the most important to the development of a community. Although the average person may think most soils look alike, in fact, there are differences that directly affect the land's capacity to accept various types of uses. Soil characteristics such as depth to bedrock, location of the water table, permeability, load bearing capacity and slippage are vital in determining which soils are suited for development activity.

The physical and chemical characteristics of the soil will vary greatly within a relatively small area. However, the purpose of this report is to provide

information of a more general nature. The maps provide an overview of where different kinds of soils are located, but can in no way substitute for field investigations prior to a soil-dependent activity. The information in this chapter is based on the York County Soils Survey of 1963 and interpretations of this data by soils experts.

There are 52 kinds of soil in York County. Soils that are similar and that are found near each other have been grouped into what are called soil associations. An association usually contains a few major soils and several minor soils. Within any one association, the soils may have a similar makeup of layers, but may differ from each other in such properties as slope, depth, density, stoniness, natural drainage, and erosion. In Monaghan Township, the soils have been categorized into three associations, each named for the major soils in it. It is interesting to compare the soil associations map with the geology map; each association corresponds generally to the underlying rock from which its soils were largely formed.

The Penn-Reading Association soils, usually underlain by Triassic sandstone or shale, are on rolling land characterized by moderately broad to narrow ridges and by short, steep slopes next to streams and drainageways. The Penn soils are shallow to moderately deep and have a reddish subsoil. The Readington soils are nearly level or gently sloping and moderately well drained; they are reddish brown in the upper part of the subsoil and mottled in the lower part. There are several minor soils in this association: in depressions are the Croton silt loams; and formed from deposits along the Conewago and other streams are the Birdsboro, Raritan, Lamington, Bermudian, Rowland and Bowmansville silt loams. (Soils were named for a town or geographic feature near where they were originally mapped.)

A substantial area of the Township has soils of the Montalto-Legore-Lehigh Association. These are found over diabase and porcelanite (sandstone and shale baked by the molten diabase), rock which is known as ironstone. The topography is rolling and hilly. The Montalto soils are deep and have a reddish, somewhat sticky subsoil. The Legore soils are gently sloping to steep, and are shallow over highly weathered diabase. The Lehigh soils, nearly level to moderately steep, are grayish and mottled in the lower part of the subsoil. Lehigh soils are nearly level to moderately steep. Minor soils include the Brecknock, Mount Lucas, Croton and Watchung series. The first two are well-drained, while the latter two are poorly drained. Much of this association, including the steep, poorly-drained and stony areas, is forested. The remaining soil group, the Lewisberry-Athol-Landsdale-Arendtsville association, is a deep or moderately deep soil underlain by sandstone, conglomerate, or fanglomerate. The general location of these major soils found in Monaghan Township is depicted on the soils map (see Comprehensive Plan of 1986). A soil type, such as Penn or Montalto, is actually a series of closely related soils that differ in their slope, degree of erosion, rockiness, sandiness, and so forth. Thus, the capabilities of a soil type (soil series) are similar but not uniform.

A substantial portion of Township land has been classified as "poor" for rotational farming. These soils are especially prevalent where the underlying rock is the hard diabase. The diabase has formed major ridges whose steepness limits agricultural use. The soils in the "poor" category vary in depth, fertility and moisture capacity, but they tend to be more stony than others in the Township. They are not suited to cultivation because of very severe natural limitations. Instead, they can be best used for hay or pasture, or for woodland, recreation or scenic areas.

Areas designated as "fair" have severe limitations due to soil properties, slopes or erosion. Their organic matter content can be maintained and the soil structure preserved if a 4 or 5 year crop rotation is used, cover crops are grown, and residues from row crops are plowed under. Contour strips and diversion terraces should be used to conserve soil and water.

An important influence on development patterns is the lay of the land - its hills and valleys, stream channels and depressions. An area's topography, usually described in terms of elevations and degree of slope, can either permit or prohibit the type and amount of development. The location of roadways and buildings, and the planning of public utilities are clearly affected by the topography.

Elevations in Monaghan Township range from less than 400 to more than 1,100 feet. The higher elevations are along ridges formed by the hard diabase rock. These points lie along the southern Monaghan Township line. After millions of years of carving away the area's sandstone and shale, rivers and streams now flow through the lowest land. Along the Yellow Breeches Creek, the elevation drops to about 360 feet.

The steepness of a slope is expressed in a percentage, derived from the number of feet the elevation changes for every 100 horizontal feet. The slope of the land affects its suitability for certain types of development. If other factors are favorable, land with a 0 to 8 percent slope is generally suitable for all uses, with the more level land ideal for industrial development. On the slope map (see Comprehensive Plan of 1986), it can be seen that small areas scattered throughout the Township are in this 0 - 8 percent category. Slopes of 8 - 15 percent are usually considered suitable for residential and associated uses only. These areas are scattered throughout the Township. Such land is too steep for large commercial and industrial

buildings since expensive grading would be required.

The 15 - 25 percent slope category is generally usable only for very low density residential development. In many instances, especially when the slopes exceed 20 percent, they are suitable only for woodlands, natural preserves, scenic areas, and similar uses. The steepest slopes, over 25 percent, are mostly located along the major streams and ridges. In these areas, construction costs are often prohibitive. Farming is very difficult and causes erosion and stream siltation. The primary value of these slopes is in their use as scenic areas, woodlands, and nature preserves. To achieve maximum benefits, development of these scenic slopes should be carefully controlled.

Drainage is the downward natural flow of water and the means by which it travels: ditches, streams, rivers or underground water channels. Monaghan Township lies mostly within the Yellow Breeches Creek drainage system. The northeastern part of the Township is drained by Stony Run and its tributaries. This stream provides the boundary line between Monaghan and Fairview Townships. Another Stony Run, located in the western part of the Township, also drains northward to the Yellow Breeches. Fishers Run is the main tributary to this stream.

A small southern portion of the Township is in the Conewago Creek drainage basin. Stony Run flows southeastward in the southeast corner of the Township and serves as a tributary to the Conewago Creek. The Conewago drains into the Susquehanna at York Haven.

The wooded areas of Monaghan Township help to absorb rainfall. As more land is developed, however, rapid runoff and floods become more common. Thus, flood prevention should be

considered in planning the amount of future growth. One strategy is to preserve stream valleys in their natural state to reduce the possibility of flooding. Undeveloped stream valleys can be useful as park, woodland, and greenbelt recreation areas.

Rapid runoff also interferes with the replenishing of the groundwater, reducing the Township water supplies. Sound conservation practices, watershed planning and flood control measures can help solve existing drainage problems and prevent future problems.

York County has a relatively mild and humid climate. This can, in part, be attributed to nearby mountains which protect the area from the more severe weather found 50 to 100 miles to the north and west. To a lesser extent, the Atlantic Ocean to the east has a moderating effect on the County's climate.

Since the prevailing winds are from the west, the weather disturbance most likely to affect the County is from the interior of the continent. Atlantic coastal storms have a noticeable but much more limited influence. In summer, the winds generally blow from the southwest, carrying in moisture from the Gulf of Mexico. Thus, the humidity is relatively high and the climate is labeled "humid continental".

The whole County enjoys a growing season of about 170 days and sufficient rainfall to promote a flourishing agricultural industry. The summer months alone produce 10 - 13 inches of rainfall. The average annual amount is 40 inches, with the heaviest concentration along the Maryland-Pennsylvania border. The winter months are drier, averaging 7 to 9 inches of precipitation, 30 percent of which is snow. The average annual snowfall is about 31 inches.

The average temperature for York County is 52.8 degrees. Winters are relatively short; the temperature drops below 32 degrees about 100 days a year. Temperatures of 90 degrees or more occur about 25 days per year, while 100-degree temperatures are relatively rare.

While climatic data for York County generally applies to Monaghan Township, the local topography will cause some variations. For example, there may be variations in temperature and snowfall at differing elevations. In the winter, colder air will follow natural drainage channels, and valleys may, therefore, be colder. At the same time, the higher hills and ridges in the Township may receive more rain and snowfall. Thus, some minor day-to-day weather variations may be expected depending on the location within Monaghan Township.

A plan for the orderly development of Monaghan Township must take into account the natural features of the land if development is to be compatible with the natural environment. Physical characteristics such as geology, soils, topography and drainage should be carefully considered in determining the type, intensity and location of land use activities within the Township.

Some aspects of the natural environment encourage development, such as suitable building soils and abundant clean groundwater, while other features including steep slopes and floodplains severely limit the use of the land. A thorough analysis of the natural features will aid in decisions about how much additional residential, commercial and industrial development should be encouraged, and where that development should occur. A good plan should utilize the positive aspects of the land to provide for needed development, while preserving the ecologically fragile areas of the natural environment.

EXISTING LAND USE

In order to determine the existing pattern of land use, a field survey of the Township was conducted. During the field work, it was noted that the present uses could be divided into seven categories: residential, commercial, industrial, public and semi-public, open space and farm land, orchards, and woodland. In addition, the residential category was divided into two sub-categories - low density (less than 1.5 dwelling units per acre) and medium density (1.5 to 6 dwelling units per acre).

Residential uses include single-family, two-family, multi-family and apartments and mobile-homes. Commercial uses are those that are designed to provide an income through the exchange of goods and services. Manufacturing

activities are those that add value to an item through changes in the state of refinement; for example, chemical manufacturing plants, sawmills, foundries, and assembly plants. Terminal and transfer facilities are also included in this category. Public and semi-public uses include those that are under government ownership and control, plus other public uses such as schools, churches, fire stations, and parks.

The following table gives a detailed breakdown of the area devoted to each of the above uses. As can be seen, the majority of the area is still utilized for woodlands, open space, orchards and agricultural uses.

EXISTING LAND USE - 1985

	Acres	Percentage
Total Land Area	8,192	100.0
Residential		
Low Density	490.5	6.0
Medium Density	86.5	1.0
Commercial	8.0	0.001
Industrial	1.0	0.0001
Woodland	3,322.5	41.0
Open Space and Farmland	3,296.0	40.0
Orchards	863.5	10.5
Public and Semi-Public	124.0	1.5

The residential category is divided into two density categories. The overwhelming residential choice in the Township is the single family residence and, for the most part, is represented by the lowest residential densities. The primary medium density residential area of the Township is the Memphord Estates development. There are no areas in Monaghan Township that can be classified as being in a high density residential area. Spatially, the residential uses are dispersed throughout the Township. The higher density residential areas, for the most part, form the core areas of residential growth.

Commercial land uses make up less than one percent of the total area and include such activities as professional services and retail businesses including welding shops, fruit markets and auto repair shops. Industrial uses also utilize less than one percent of the Township's land area. These activities include the storage of construction materials and the producing of heating stoves. These activities are scattered throughout the Township.

Public and semi-public uses occupy about 1.5 percent of the land area. These include the churches, fire company, camp areas, utility lands, and recreational areas. The remainder of the area, over 91 percent, is either woodlands, orchards, open space, or farmland. A significant portion of land used for agricultural purposes is being used for orchards. The woodland is mainly associated with the steeper slopes in the Township. No area of the Township seems of greater significance than any other area. The development pattern is dispersed with no distinct settlement pattern.

THOROUGHFARE STUDY

Regionally, Monaghan Township is served by four major highways: Interstate 83, U.S. 30, U.S. 15, and the Pennsylvania Turnpike (Route 76). Interstate 83 to the east of the Township travels north to south providing access to York, Harrisburg, and Baltimore. U.S. 30 to the south travels east and west. U.S. 15 to the west travels primarily north to south. Route 76 lies to the north of the Township and provides important east-west connections across the state. U.S. 30 serves as the major east-west full-access thoroughfare through the County. U.S. 15 serves as a direct accessway to Harrisburg. The I-83 interstate is the major north-south limited access thoroughfare serving the York County area.

In addition to these major regional highways, there are several roads in Monaghan Township which are of a more localized significance. Among these are Siddonsburg Road (L.R. 66001, T-917) which is divided into west and east by York Road. This is the major east-west road in the Township. York Road (L.R. 66025) is the major north-south road in the Township. It is divided into north and south by Siddonsburg Road. Other important secondary roads in the Township include Filey's Road, Lewisberry Road, and Andersontown Road.

There are 37.58 miles of roads in Monaghan Township which are maintained either by the State or the local government. The State road system carries the larger volumes of traffic, while the Township roads and streets serve primarily as access to individual properties in the Township. Map 10 (see Comprehensive Plan of 1986) identifies all roads under the jurisdiction of the Pennsylvania Department of Transportation. Such roads make up 13.86 miles or 37 percent of the total road system in the Township. 23.72 miles or

63 percent of the road system is under the jurisdiction of Monaghan Township. Of the thirty-two second class townships in the County, Monaghan Township ranks thirty-first in terms of Township road mileage; Chanceford Township ranks first with over 93 miles, while Heidelberg Township with 22 miles ranks last in Township road mileage.

The fact that the State has part of the dual responsibility for providing and maintaining a road system within the Township eases the municipality's financial burden. While this dual responsibility for the road system has its financial advantages, it also has disadvantages with respect to the improvement priorities set by the State. While the State road systems are primary routes of travel through the Township, their importance in the total Statewide road system may be insignificant and, therefore, problems of road priorities emerge with respect to reconstruction and repair needs.

Road conditions affect the thoroughfare system since they limit the speed with which vehicles may safely use roads, and they play a part in determining which routes of travel will be used more heavily. Poor road conditions not only deter usage but can also be contributing factors in the causation of accidents which will be discussed later. Thus, the road conditions affect the efficiency of the roads in terms of their capacity to provide safe and convenient accessibility to areas where residents live, work, shop and participate in leisure time activities. Maps 11, 12, and 13 present the conditions of State and Township roads (see Comprehensive Plan of 1986).

All of the State roads are paved. Some have been paved with asphalt, while others have been constructed in a tar-and-chip manner. They have travelway widths which vary from 14 to 18 feet. Most of the Township roads are paved. The

widths of these roads vary from 14 to 30 feet. While travelway widths indicate the surface of the roadway used for both travel lanes and parking lanes, right-of-way widths include the total area available for shoulders, utility poles, sight distance buffer zones and expansion or widening of the roadway. The rights-of-way are variable, but generally most State and Township roads have a minimum of 33 feet except where the character and construction of the road warranted additional widths. Most new roads are now being built with a minimum right-of-way of 50 feet, with interstate and other major highways requiring as much as 300 feet.

A relatively common occurrence which contributes to poor roadway conditions is the tendency of paved roads to deteriorate at the travelway edge. This generally occurs where original travelway widths are inadequate, thus causing vehicles to frequently use the outer edges of the roadway which results in crumbling pavement. Another cause of such deterioration is inadequate provision for surface drainage, especially in areas of steep grades and heavy runoff. Improper drainage facilities have caused erosion and rutting beside some local roads in the Township.

A general condition that exists in the Township is the lack of highway striping and traffic control signs. Edgelines and centerlines should be provided on all streets. In many places, traffic control and warning signs are needed. When properly used, these devices provide a much greater margin of safety on any roadway.

While many potentially hazardous conditions exist throughout the Township, the hazardous location map (see Comprehensive Plan of 1986) has attempted to depict those points at which traffic volumes, pedestrian volumes or unusual conditions interact to create hazards. Many of the intersections involve visual obstructions caused

primarily by foliage, structures and roadway alignment characteristics.

Traffic volumes and patterns vary for different types of communities. The safe, efficient and rapid accommodation of traffic movement is a matter of major concern to the community. The ability of the thoroughfare system to accommodate traffic volume demand depends upon a number of factors including: the width of the road, the number of traffic lanes, the speed of travel, sight distances, grades, curves, and the number of interruptions in traffic movements. Urbanized areas generally have a high number of local trips; that is, trips that originate and/or have their destination within the municipality itself. Rural areas, on the other hand, generally have a higher number of through trips. The State roads are primarily responsible for carrying heavier volumes of traffic and through movements, while the Township roads are primarily responsible for servicing properties and carrying lesser volumes of traffic.

The traffic volume map (see Comprehensive Plan of 1986) shows the average daily traffic volumes along selected roads throughout the Township. The traffic volume map depicts graphically the amount of traffic generated throughout the Township on a typical day.

COMMUNITY FACILITIES

Community facilities consist of the various services which must be provided in order to promote the education, safety, health and physical well-being of those citizens who live within a community. Generally, these are considered to be such services as public education, fire protection, police protection and recreational facilities. While the quality and quantity of services provided are of prime concern to the existing residents of the community, they are of equal importance to prospective residents, industry and commerce

which may be considering locating within the Township. The best way is to ensure that community facilities are a plus both now and in the future.

Coordination among agencies can help to avoid duplication and gaps in service while still being practical, efficient and economical. For example, cooperation among adjoining municipalities can make the provision of services practical in a milieu where a single community would find it economically impossible. This form of coordination is already in existence in the form of school districts.

Monaghan Township lies totally within an area that is served by the Northern York County School District. The Northern York County School District serves Monaghan Township residents with a high school, a middle school, and three elementary schools. All of the schools are located outside of Monaghan Township.

Open space for both residential and aesthetic reasons is an integral part of the modern community. No primary recreation facilities are owned or operated by the Township.

On the County level, there are several projects for recreation and conservation purposes. A 738 acre tract in Hellam and Springettsbury Townships has been developed by the County Parks and Recreation Board as a recreation and open space area. This site, Rocky Ridge Park, is helping to preserve the existing heavily wooded terrain and offer many types of recreational opportunities for the public. Two additional sites have been donated to the County for use as recreational areas. One of these sites, the Richard M. Nixon Park, is a 142 tract in Springfield Township, just west of Jacobus Borough, while the second is called Apollo Park of York County containing 97 acres and located along the Susquehanna River in Chanceford Township.

Rocky Ridge Park and Richard M. Nixon Park are both open for use. Two additional sites have been acquired for future recreational development. One is a 368 acre site located east of Interstate 83 near Winterstown Borough named Spring Valley, and another is John Rudy Park just northeast of York City in Manchester Township which encompasses an area of 147 acres.

Other regional-type facilities which are available for use by the Township include Pinchot State Park just to the south in Warrington Township, William H. Kain County Park, P. Joseph Raab County Park, Sam Lewis State Park, Codorous State Park, and the York County Rail Trail. In addition, state game lands are scattered throughout the County, and those located in Warrington and Franklin Townships are especially accessible to Township residents.

Monaghan Township is in contract with Carroll and Franklin Townships in sharing their police force. This police force consists of a chief and six officers. Additional police protection is provided by the Pennsylvania State Police.

Fire protection in the Township is provided primarily by the Monaghan Township Volunteer Fire Company. However, five other municipal fire companies provide service within the Township. These include: Upper Allen in Cumberland County, and Dillsburg, Franklintown, Lisburn and Wellsville from York County. Financial support for these companies includes membership dues, social fund-raising activities and municipal contributions.

The equipment of these five companies is extensive. In addition, the services are connected to the County Communications System which provides a centralized communication system for Township residents to utilize in obtaining fire protection service.

At present, the Township municipal building located on South York Road in the community of Mt. Pleasant serves as the center of Township activity. In addition to the administrative functions of the Township, the highway maintenance operations are carried out in this building. A public meeting room for Supervisor and Planning Commission meetings is also available in the Township building. At times, the facilities are inadequate in that there is insufficient space to hold large public gatherings. Most recently, the new fire hall has been used on these occasions.

PUBLIC FACILITIES

Currently, most of the residents of the Township rely on individual on-site sewage disposal systems. This is defined by the Pennsylvania Sewage Facilities Act (Act 537) as a single system of piping, tanks or other facilities serving one or two lots and collecting or disposing of sewage in whole or in part into the soil of the property or into any waters of the Commonwealth.

The soil limitation map (see Comprehensive Plan of 1986) graphically depicts the extent of soil suitability for on-site sewage disposal. The areas classified as having none to slight limitation comprise approximately less than 3 percent of the Township; the areas of moderate limitation comprise about 20% of the Township; and 77% of the Township has severe limitations for OLDS.

Fortunately, no part of Monaghan Township is designated as hazardous. The soils in this grouping are generally unsuitable because of a high risk of groundwater contamination. This is primarily the result of very rapid percolation of the sewage effluent through the soil, which thus reaches the groundwater supply before it has been adequately filtered.

There is one community system existing in the Township. This is privately owned and is located in the Memphord Estates section of the Township. It is a surface discharge system which discharges directly into Stony Run.

Presently, there are no community water supply systems located within the Township. Township residents rely on on-site wells for their water supply. The source for those systems is the groundwater supply which is related to geological formations. The geological characteristics of the rock formations underlying the Monaghan Township area are of prime importance insofar as the development of adequate groundwater supplies is concerned. Generally, the Township is underlain by sandstone and shale formations in which groundwater yields can be highly variable (5 to 200 gallons per minute).

At the present time, refuse disposal is handled on an individual basis, without Township involvement. Two private refuse haulers provide most of the service within the Township with service on a once a week basis.

There are two sanitary landfills located in York County that can accept refuse from the Township. One is operated by a private company and is located in Windsor Township with a site size of approximately 75 acres. The other is operated by the County of York and is located in Hopewell Township on a site of approximately 300 acres. No licensed sanitary landfills are located within the Township. It appears that most of the Township's refuse is being taken to the York County landfill in Hopewell Township with some going to a Franklin County site and some going to a landfill in Dauphin County.

Electricity is available to all Township residents either through the Metropolitan Edison Company or Pennsylvania Power and Light Company.

Monaghan Township has two major electrical power transmission lines. One crosses from the Memphord Estates area on the western boundary of the Township to the approximate intersection of East Mt. Airy Road with the Township line on the eastern border. The other lines split from the first set near South York Road and travel almost directly south close to the intersection of the Monaghan, Carroll, and Warrington Township lines. The reason for these lines is the general proximity of two power generating stations on the Susquehanna River. One is a coal fired plant at Brunners Island to the southeast, operated by Pennsylvania Power and Light Company, and the other is a nuclear station to the east of Goldsboro at Three Mile Island operated by the Metropolitan Edison Company.

Telephone service is provided to the Township by two companies. The Township is serviced by Bell Telephone Company, with the remainder serviced by GTE, Inc. The GTE service area is located generally within the southern portion of the Township. The two-company telephone situation has a fragmentary effect on the community. GTE has toll calls to those exchanges in the Dover and Mechanicsburg areas, while Bell Telephone Company has toll free calls to exchanges toward Lewisberry and Harrisburg.

There is presently no cable television service being provided within the Township.



APPENDIX II

Community Meeting Record



APPENDIX II

TOWNSHIP OF MONAGHAN COMMUNITY MEETING RECORD FEBRUARY 23, 1998

As part of the process of developing a comprehensive plan, the Township of Monaghan held a community meeting on Monday, February 23, 1998. The meeting was held at the Township Building for the purpose of identifying community issues, ideas and needs related to the use of land, community facilities, municipal services, transportation, housing, growth and development, historic preservation, parks and recreation, environmental and natural resources, nuisances, etc.

Fifteen (15) people gathered to participate in the public meeting process. The Nominal Group Technique (NGT), a small group facilitation process, was used to insure that all participants were afforded an equal voice in defining their ideas. Community-based issues and ideas were identified by focusing on the following questions:

- ▶ What do you like and dislike about the existing character, design and types of uses within the Township?
- ▶ In the future, what types of uses and development patterns would you like to see occur in the Township?

The group was instructed that their responses could relate to any of the following land use topics?

- Community Facilities/Services
- Parks and Recreation
- Historic Preservation
- Cultural Resources
- Residential, Commercial, Industrial and Agricultural Uses
- New Development Patterns
- Reuse of Land
- Sidewalks, Signs and Lighting

The participants were led by a neutral facilitator and asked to provide their views related to the questions stated above. Their ideas could be related to any issue they felt was important.

The NGT process consisted of the following five steps:

- (Step 1) Idea Writing - Each person was asked to jot down their ideas on the questions before the group.
- (Step 2) Idea Recording - Each person's ideas were recorded one at a time on large sheets of paper prominently displayed in the front of the group.
- (Step 3) Idea Discussion/Clarification - Each idea was then discussed and clarified. This step moved the ideas from being those of the individuals to becoming the ideas of the group.
- (Step 4) Priority Setting - After the issue and idea identification and clarification had been exhausted, participants were asked to select the top three (3) ideas from the list before the group. This general type of scoring process was used to gain a basic understanding as to the "key ideas" of the group. However, it was noted that all of the ideas developed by the group were important and would be considered when developing the Comprehensive Plan. This information will be combined and compared with the concepts generated by the Township Steering Committee when the mission statement was prepared.
- (Step 5) Presentation - When everyone had completed the exercise, the facilitator presented the findings to the entire group as shown on the following table. Delineated on the table is the specific topic, the Committee selections, and the subsequent ranking of the key ideas within the Township.

Table AII-1

<p style="text-align: center;">TOWNSHIP OF MONAGHAN COMMUNITY MEETING FEBRUARY 23, 1998</p>		
A, B, G, I, L	Not in favor of new development with high density in a small area; Like present zoning with preservation of agriculture, a conservation zone and minimal commercial use; Preservation of natural features such as Yellow Breeches Creek, wooded areas and open space; Dislike orchards to be replaced by houses.	3, 3, 3, 3, 2, 3, 3, 3, 2, 3
C, J	Want to see emphasis on recreation in the Township including community parks, neighborhood parks and playgrounds; Need a sense of community and place.	2, 1, 2, 2, 1, 1
D	Would like to see a little commercial growth.	2, 2
E	Allow Township to grow with small residential developments - not a town.	3, 2
F	Like to see history preserved and made available to residents.	1, 1
H, K, Q	Road system needs improvement, design is outdated; People run and bike, a dangerous situation, need path or improved berm; Would like to encourage people to ride bikes and walk within the Township.	2, 1, 1
M, N, O, T	Property owners must be treated fairly when regulating the development of agricultural/orchard lands. Don't penalize the farmer; Like to see growth planned in a responsible manner while preserving some open land. Give landowners incentives to preserve; Evaluate available statutes to compensate property owners in preserving agricultural land; We need a balance in regulating. Responsible development.	2, 3, 2, 2, 3, 2
P, U, X, Z	Improve working relations with other municipal agencies such as planning, fire company, police, zoning, etc.; Need to work well with neighboring municipalities; Need to be aware of what is going on outside our Township and how it impacts us; Become aware of school district issues and taxes.	1, 1, 3, 1, 2, 1, 2, 3
R	Like dark atmosphere at night, not many lights.	1, 1
S	Need to be prepared for regulation of towers and telecommunication facilities.	1
V	Re-evaluate Township regulations and nuisance laws.	3
W	Lack of continuity in the way laws are applied or enforced such as leash laws and blight.	0
Y	Inclusion of national trends in Township development such as water service, wastewater disposal, land use trends.	0

In summary, the exercise outlined above leads to the conclusion that the four most important issues in the Township are in order of importance:

- A, B, G, I, L ▶ Preservation of rural character
- M, N, O, T ▶ Fairness in land use regulations
- P, U, X, Z ▶ Improvement in municipal relationships
- C, J ▶ Develop recreational facilities and a sense of place

APPENDIX III

Background Data (1998)



APPENDIX III

BACKGROUND DATA (1998)

1. GENERAL EXISTING LAND USE CHARACTER ANALYSIS

For the purposes of this analysis, the Township has been divided into four (4) planning areas along the two (2) primary transportation routes in the Township. York Road bisects the center of the Township in a north/south direction, while Siddonsburg Road crosses the northern quarter of the Township in an east/west direction. The planning area designations are as follows:

Planning Area 1: Northwest Quadrant - area north of West Siddonsburg Road and west of North York Road. (Including the area immediately adjacent to the southern side of West Siddonsburg Road and the eastern side of North York Road.)

Planning Area 2: Northeast Quadrant - area north of East Siddonsburg Road and east of North York Road. (Including the area immediately adjacent to the southern side of East Siddonsburg Road.)

Planning Area 3: Southwest Quadrant - area south of West Siddonsburg Road and west of South York Road. (Including the area immediately adjacent to the eastern side of South York Road.)

Planning Area 4: Southeast Quadrant - area south of East Siddonsburg Road and east of South York Road. Exhibit AIII-1 shows the overall generalized existing land use pattern in Monaghan Township.

A. Introduction

On March 16, 17, and 18, 1998 a general land use character field survey was conducted throughout Monaghan Township by Herbert Rowland and Grubic, Inc. (HRG). The information gathered was checked through consultations with the Township staff and the Comprehensive Plan Steering Committee. To determine how effective the current land use policies are and what changes may be necessary to implement the future goals of the Township, the existing land use survey was compared to the land use survey map completed during the preparation of the Township's 1986 Comprehensive Plan.

The background data which follows a review of existing land use, transportation and recreation facilities. It should be noted that information regarding population and environmental constraints (e.g., soils) is being completed as part of the Township 1998 Act 537 planning process.

B. Planning Area 1 - The Northwest Quadrant

Planning Area 1 is the northwestern quadrant of the Township. The quadrant is bordered by the Yellow Breeches Creek to the north, North York Road to the east, West Siddonsburg Road to the south and Carroll Township to the west. The northwestern corner of the Planning Area is bisected by Stony Run, a tributary to the Yellow Breeches Creek. An unnamed tributary to the Yellow Breeches Creek also flows across the eastern side of the quadrant. The topography of the planning area is steeply sloped along Stony Run and the western side of North York Road.

The remainder of the planning area is flat or gently sloping. Development in the quadrant has been primarily limited to tracts that border the sides of the roads. The interior portions of the quadrant that have not been developed and are forested.

A cabinet shop, ice cream and farm market, and machinist shop were the commercial uses identified in the Northwest Quadrant. The ice cream and farm market is located on the western side of North York Road approximately 1/4 mile from the intersection of Siddonsburg Road and North York Road. Staley's Mechanicals is located to the north of West Siddonsburg Road on the eastern side of North Grantham Road. The cabinet shop is situated on the corner of North Grantham and West Siddonsburg Roads.

In terms of residential development, the majority of the dwellings consist of single-family units. Three (3) of the single-family units are located on large acreage lots. Development has occurred in two (2) patterns, roadside housing and planned development. Based on the density of the woods, most of the roadside housing lots were forested areas that were cleared for development. The density of the roadside housing units is greatest along the northern and southern ends of North York Road, West Siddonsburg Road, North Fileys Road and the northern end of North Grantham Road. All of the roadside dwellings were in good to excellent condition. The three (3) single-family dwellings on large acreage lots are located on the northern side of Gilbert Road and the eastern side of Stony Run Road.

Two (2) planned developments of single-family dwellings¹, Audubon Park and Memphord Estates,

¹According to the Township, a planned subdivision has the following characteristics: density, interior street systems, size/scale and identification signs.

are located along West Siddonsburg Road. Audubon Park² is located on the southern side of West Siddonsburg Road, approximately 1/2 mile to the west of North York Road, and is currently comprised of thirty-two (32) manufactured housing units. The Park is well maintained and all of the housing units are approximately ten (10) years old. During the field survey, it was noted that there is only one (1) access road into and out of the Park. This is significant because multiple access points into and out of a development create a better overall traffic flow pattern and provide alternate routes for the residents in the event that one (1) of the access points is blocked.

Memphord Estates is located at the edge of the Township on the northern side of West Siddonsburg Road. The development has approximately one hundred thirty-six (136) single-family units of varying styles³. All of the homes are two (2) to twenty years (20) old and appear to be in excellent condition. Although the development has three (3) separate access points, they are all located along West Siddonsburg Road.

Two (2) community facilities are also located in the Northwestern Quadrant. The athletic facilities for Messiah College are located at the edge of the Township to the north of North Grantham Road. Monaghan Township Volunteer Fire Company sits at the corner of West Siddonsburg Road and South Grantham Road between Memphord Estates and Audubon Park.

²Audubon Park is served by a wastewater package plant and community wells. Memphord Estates is served by a private wastewater package and private individual wells.

³Forty-three (43) lots will be added to Memphord Estates when the construction of Phase VI is complete.

In summary, the land use in the Northwestern Quadrant is characterized by:

- Large forested tracts.
- Roadside single-family dwellings.
- Two (2) planned subdivisions - Memphord Estates and Audubon Park.
- Four (4) existing commercial uses - a cabinet shop, an ice cream and farm market, and machinist shop.
- Two (2) community facilities - Monaghan Township Volunteer Fire Company and the athletic facilities for Messiah College.

C. Planning Area 2 - The Northeast Quadrant

The Northeast Quadrant, or Planning Area 2, is bounded to the north by the Yellow Breeches Creek, to the east by Stony Run, to the south by East Siddonsburg Road and to the west by North York Road. Pippins Run, a tributary to the Yellow Breeches Creek, flows across the western side of the quadrant. Generally, the topography of the quadrant is steeply sloped in the northern and eastern region and hilly in the southern and western region.

The two (2) dominant land uses identified in the Northeast Quadrant are the woods and the commercial orchards and tree nurseries. The wooded areas are found on the northern and eastern sides of the quadrant and the southwestern corner. The commercial orchards and nurseries are found primarily along the northern and southern end of North Lewisberry Road.

A fruit stand is located in this area while a dog grooming shop and a taxidermy shop are both located at the corner of North Lewisberry and

North York Roads.

Development in this quadrant is comprised of low density single-family dwellings and three (3) single-family dwellings on large acreage lots.

The Northeastern Quadrant is characterized by the following:

- Steeply sloped and wooded terrain.
- Commercial orchards and nurseries.
- Low density single-family dwellings.
- No community facilities.

D. Planning Area 3 - The Southwest Quadrant

The Southwest Quadrant is bounded to the north by West Siddonsburg Road, to the east by South York Road, and to the south and west by Carroll Township. The southern end of the quadrant is bisected by Fishers Run and several unnamed tributaries to Fishers Run. Electric transmission lines bisect the quadrant. The topography of Planning Area 3 is relatively flat with gently rolling hills. The large multi-acre forested tracts observed in the other planning areas have been transformed into farm fields or commercial orchards and nurseries.

South York Road is the primary north/south corridor through the Township. The portion of South York Road that lies in Planning Area 3 contains the Villages of Siddonsburg and Mt. Pleasant. Since Siddonsburg lies only seven-tenths of a mile to the north of Mt. Pleasant, the southern and northern limits of the villages blend together creating a concentrated corridor of residential, community and commercial uses.

Five (5) of the commercial uses identified in the southwest quadrant are located in the Siddonsburg and Mt. Pleasant corridor. The uses include an

auto body shop, Vogelsong Airport, Dillsburg's Aeroplane Works, antique shop, advertising agency, auto sale lot, and auto repair garage. The four (4) remaining commercial uses identified in the quadrant are a nursery school, located on the western side of South Fileys Road, a structural steel and miscellaneous metals company, which is located to the west of the intersection of Big Oak and South York Road, a tree nursery, located on the western and eastern sides of South Fileys Road and a high grade metal tubing business, located on Sawmill Road..

The residential uses in Planning Area 3 were dominated by single-family dwellings. The density of the single-family dwellings is greatest along South York and South Grantham Roads. Generally, all of the single-family dwellings observed in the quadrant were in good to excellent condition.

Nineteen (19) farmsteads were identified in the Southwest Quadrant. The majority of the farmsteads are located to the south of Sawmill Road. Two (2) of the farms raise beef cattle. All of the farms were surrounded by grassed fields or fields with remnant corn and wheat stubble.

Three (3) community facilities were identified in the southwest quadrant, the Township building, Mt. Pleasant Church of God and Fileys Christ Lutheran Church. The Township building and the Mt. Pleasant Church of God sit on opposite sides of West Mt. Airy at the intersection of South York Road. The Mt. Pleasant Church of God cemetery is situated on the southern side of Meadow Trail. Fileys Christ Lutheran Church and cemetery sit on the eastern side of South Fileys Road just to the north of Fileys Nursery School.

The following uses characterize the Southwest Quadrant:

- The Siddonsburg and Mt. Pleasant corridor is a concentrated cluster of residential, community and commercial uses.
- Land use outside of the Siddonsburg and Mt. Pleasant corridor is dominated by agricultural activities.
- This quadrant has the least amount of forested area in the Township and the highest number of commercial and community establishments.

E. Planning Area 4 - The Southeast Quadrant

The Southeast Quadrant or Planning Area 4 is located to the south of East Siddonsburg Road, to the west of Stony Run Creek and to the east of South York Road. The southern boundary of the quadrant adjoins Warrington Township. The interior of the quadrant is crossed by a series of small streams. Most of the streams drain into Stony Run, the North Branch of Beaver Creek or the Yellow Breeches Creek. Pippins Run, which flows across the northeastern quadrant to the Yellow Breeches Creek, is the largest of the interior streams. Large electric transmission lines cross the southwest corner of the quadrant. The topography of the quadrant is hilly becoming steeply sloped along the southern and eastern boundaries. The forested areas in this sections are found primarily on these steeply sloped areas.

A wide variety of uses are found in this area. The primary uses are agricultural, residential and commercial. The agricultural uses are dominated by commercial orchards and nurseries found along South Wharf Road, Mountain Road, Elicker Road, East Mt. Airy Road, Orchard Drive, and East Ridge Road. Fruit stands are situated at the corner of Orchard Drive and East Mt. Airy Road, and East Ridge and East Mt. Airy Roads.

The residential development in the southeast quadrant consists of rural single-family dwellings. The density of the single-family dwellings is greatest along Meadow Trail and Manor Drive which lie directly to the east of the Village of Mount Pleasant. The age of the homes varies but the general condition is good. The majority of the farmsteads are located along Mountain Road, Andersontown Road and Siddonsburg Road.

The commercial uses in Planning Area 4 are comprised of a petroleum company, a tree trimming company, an automotive center, a coal and wood burning stoves manufacturer/factory outlet, a vacant gun shop, a dog kennel, and dog camp, crematorium, cemetery, and store. The automotive center is located on the northern side of South Lewisberry Road at the edge of the Township's eastern border with Fairview Township. The coal and wood burning stoves manufacturer/factory outlet, the gun shop, and the dog kennel are all located along East Mt. Airy Road. The dog camp, crematorium, cemetery, and store are situated on the western side of Andersontown Road. The petroleum and tree trimming companies are located on Meadow Trail and Mountain Road, respectively.

In addition to the agricultural, residential and commercial uses, the Southeast Quadrant also has one (1) community facility. The Andersontown Church of God and Cemetery is located on the eastern side of Andersontown Road across from the dog camp, crematorium, cemetery, and store. In summary, Planning Area 4 is characterized by the following:

- Large areas of land devoted to commercial orchards and nurseries.
- Low density rural single-family dwellings scattered along most of the roads.
- Commercial uses comprised of a petroleum and tree trimming company, an

automotive center, a vacant gun shop, a dog kennel, a coal and wood burning manufacturer/factory outlet, and a dog camp, crematorium, cemetery and store.

- The Andersontown Church of God and Cemetery

F. Comparison of Existing Land Use to 1986 Land Use .

In 1986, about seven (7%) percent of the Township land area was considered "developed". Seventy-five (75%) percent of the Township was considered physically unsuited for many types of development. Factors such as steep slopes, poor drainage, flooding and soils poorly suited to subsurface sewage disposal limited the perceived capability for future development. Essentially, these observations have not changed in the ensuing twelve (12) years.



2. TRANSPORTATION

A. Introduction

In coordination with the existing land use analysis of Monaghan Township, a transportation analysis was also completed by Herbert, Rowland & Grubic, Inc. (HRG). The goal of the transportation analysis is to evaluate the existing roadway network in terms of condition. This evaluation is then used to prioritize Township roadways and intersections in need of general improvements. The basis of the transportation analysis consisted of a field view of the existing transportation network in the Township, which was completed on May 13 and 14, 1998. The field evaluation was supplemented by information from the Township Secretary, York County Planning Commission and PennDOT.

B. Existing Transportation Network and Circulation Patterns

Regionally, Monaghan Township is served by three (3) major highways: Interstate 83, U.S. 15, and the Pennsylvania Turnpike (Interstate 76). Interstate 83 to the east of the Township facilitates travel north and south providing access to York, Harrisburg, and Baltimore. U.S. 15 to the west facilitates travel primarily north and south. Interstate 76 lies to the north of the Township and provides important east-west connections across the state. U.S. 15 serves as a direct accessway to Harrisburg. Interstate 83 is the major north-south, limited access thoroughfare serving the York County area.

In addition to these major regional highways, there are several roads in Monaghan Township which are of a more localized significance. Among these are Siddonsburg Road (S.R. 4028), which is divided into west and east by York Road and is the major east-west road in the Township. York Road (S.R. 4035) and Lewisberry Road are the major

north-south roads in the Township. They are divided into north and south by Siddonsburg Road.

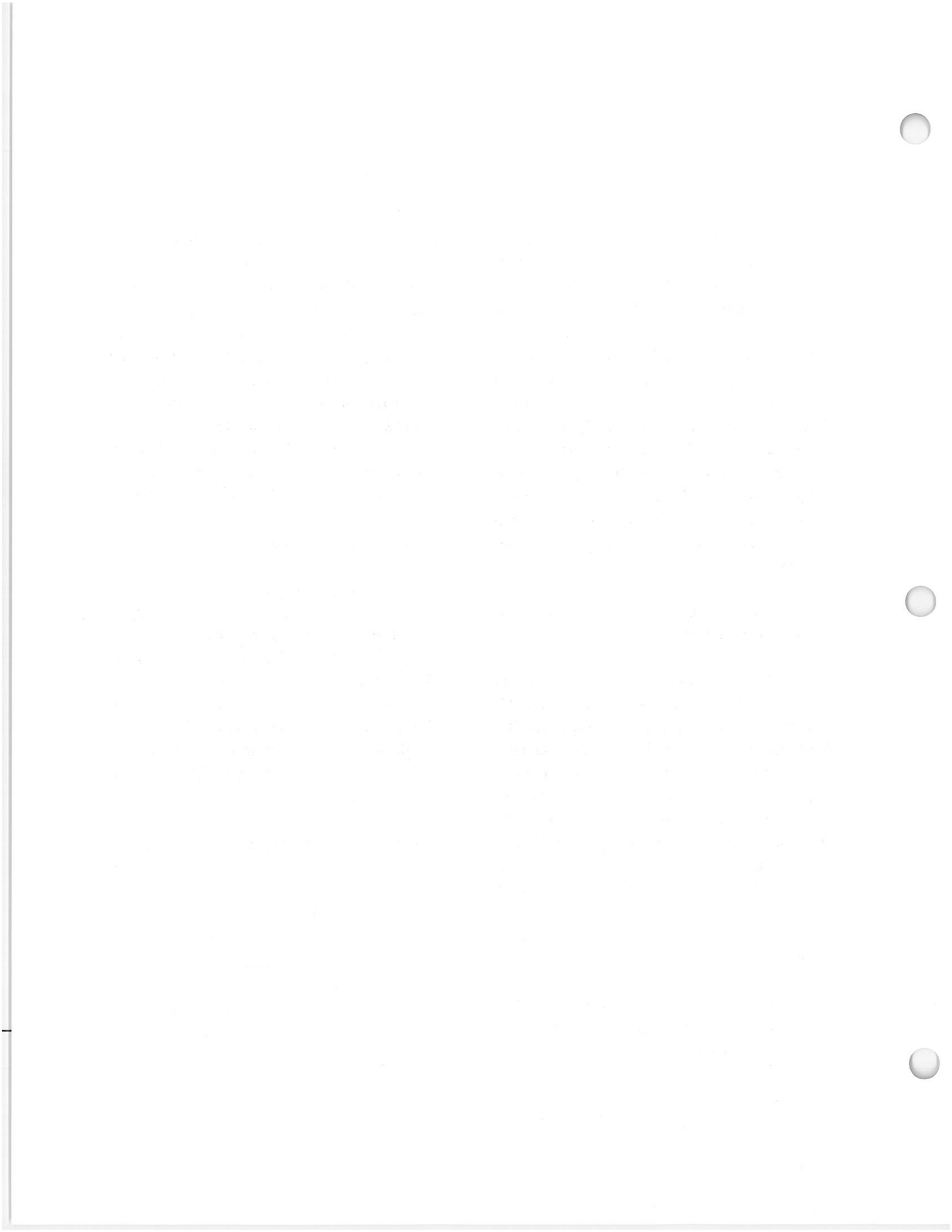
There are approximately 39.44 miles of roads in Monaghan Township which are either State or Township-owned and maintained. State roads include South Fileys Road (S.R. 4037), West Siddonsburg Road (S.R. 4028), a portion of East Siddonsburg Road (S.R. 4028), North York Road (S.R. 4035), South York Road (S.R. 4035), South Lewisberry Road (S.R. 4022), and a portion of Andersontown Road (S.R. 4033). State Roads constitute 11.23 miles of the transportation network. Approximately twenty-eight (28) miles or seventy-two (72%) percent of the road system is under the jurisdiction of Monaghan Township.

C. Roadway Classification

Functional classification is used in this analysis to categorize the roadways in the Township according to their function. Primarily, roadways serve two (2) functions, mobility (the ability to go from one place to another) and access (the ability to enter adjacent property). The roadway's functional classification is based on these two (2) roadway functions. For the purpose of this study, the roadways will be classified into the following three (3) categories⁴:

- Arterial - Serves long distance through trips providing a high degree of mobility.
- Collector - Collects traffic from local roads and connects them with arterials. Provides balance between mobility and access.
- Local - Serves local land use with very little emphasis on mobility.

⁴York County Planning Commission, Transportation, 1996.



The County recently developed a functional classification network pertaining to the Northern Region of the County. In that report, there are no roads in Monaghan Township classified as an arterial. North and South York Road and East and West Siddonsburg Road are classified as minor collectors and all other roads are considered local in nature. From a Township perspective, it may be appropriate to also consider North Grantham Road, North Lewisberry Road and East Mount Airy Road as collectors. A summary of the Township-owned roadways is given in Table 1.

D. General Roadway Conditions

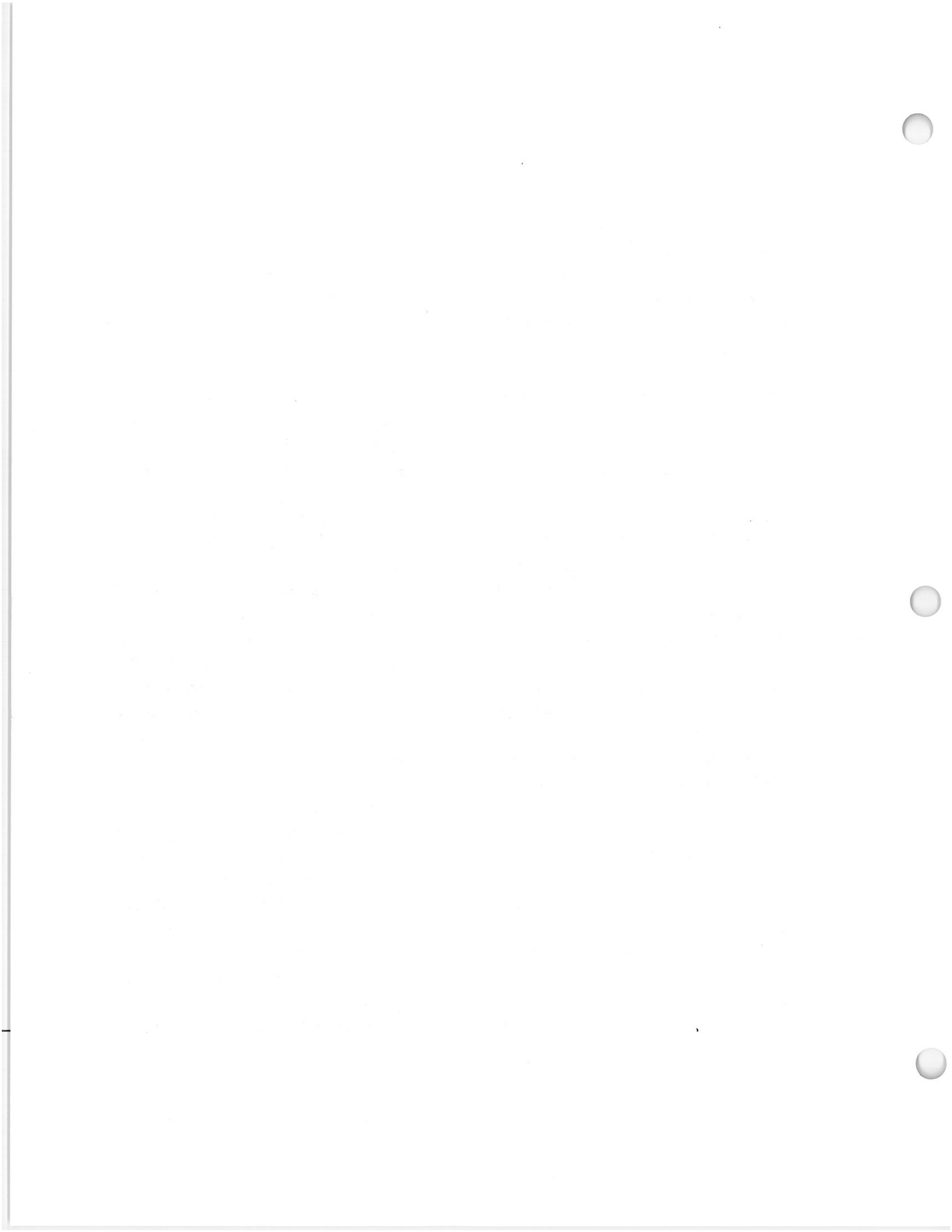
In general, roadways within the Township are in good to fair condition with the exception of Elicker Road, Mowery Road, Orchard Drive, Stony Road, Stony Run Road, and North Wharf Road. Stony Road and portions of Stony Run Road and North Wharf Road are unimproved roadways with a dirt and stone surface. In evaluating the condition of each roadway, the severity and extent of cracks and potholes were noted, as well as the presence of rutting. Additionally, the roughness of the roadway was evaluated. The following criteria were used to classify the condition of each roadway⁵:

- **Good Condition** - Cracks are hairline or are just beginning to appear. The overall length of longitudinal cracks is less than ten (10%) percent of the roadway length and/or transverse cracks are more than fifty (50) feet apart. Alligator cracking encompasses less than ten (10%) percent of the total roadway area. Potholes occur in less than ten (10%) percent of the total roadway area and/or there

are fewer than five (5) potholes per one hundred (100) feet. Edge cracking is minimal and is confined to within one (1) foot of the roadway. The road has a smooth, even surface.

- **Fair Condition** - Crack widths are up to one-fourth (1/4") inch. Some pavement pieces may be loose, however, are still interconnected. The overall length of longitudinal cracks is between ten (10%) percent and thirty (30%) percent of the roadway length and/or transverse cracks are between twenty-five (25) and fifty (50) feet apart. Alligator cracking encompasses between ten (10%) percent and thirty (30%) percent of the total roadway area. Potholes occur between ten (10%) percent and thirty (30%) percent of the total roadway area and/or there are between five (5) and ten (10) potholes per one hundred (100) feet. Edge cracking extends up to two (2) feet into the pavement and occurs between ten (10%) percent and thirty (30%) percent of the roadway length. At posted speed limits, there is noticeable unevenness, but safety is not inhibited.
- **Poor Condition** - Cracks are well defined and contain foreign material. Displacement of pavement pieces has occurred. The overall length of longitudinal cracks is over thirty (30%) percent of the roadway length and/or transverse cracks are less than twenty-five (25) feet apart. Alligator cracking encompasses more than thirty (30%) percent of the total roadway area. Potholes occur in more than thirty (30%) percent of the total roadway area and/or there are more than ten (10) potholes per one hundred (100) feet. Edge cracking extends beyond two (2) feet into the pavement and occurs for more than

⁵Road surface management systems manual April 1992, developed through New Hampshire Technology Transfer Center of the University of New Hampshire.



thirty (30%) percent of the roadway length. The pavement surface is very uneven and causes a safety hazard for vehicles traveling at the posted speed limit.

The most frequent deficiency of roadways within the Township is their substandard cartway widths and lack of shoulders. The majority of the roadways have cartway widths less than twenty (20) feet. Typical widths range from fourteen (14) feet to eighteen (18) feet. Table AIII-1 summarizes the roadway condition and width of the roadways within the Township.

Another frequent problem noted on the Township's roadways was the lack of stormwater facilities. The most noticeable problems were found along the roadsides of North and South York Road, West Siddonsburg Road, Dorseys Lane, South Grantham Road, South Lewisberry Road (near Township line), and Manor Drive. A brief description of each roadway, including other deficiencies in signing, pavement marking, or sight distance are described briefly below.

Al-Pat Drive is located in the northern and western-most portion of the Township and services several residential dwellings. If traffic volumes increase beyond current levels, the road may have to be widened.

Andersontown Road is a state roadway located in the northeastern portion of the Township. Although the roadway is substandard in width, the close proximity of houses and other structures makes widening infeasible in some areas. The bridge over Stony Run is of substandard width and should be widened. Additionally, guiderail should be installed on the north side of the roadway west of the bridge in the area of the cross pipe. At its intersection with East Siddonsburg Road, guiderail should be installed on the southwest radius to protect the cross pipe outlet.

Autumn Drive provides access to Memphord Estates. The roadway is in fair condition due to moderate cracking and some potholes. Additionally, in some cases, the pavement is not flush with manhole covers. The roadway is adequate in width and has concrete curb on both sides⁶.

Big Oak Road is a two (2) lane roadway located in the southern portion of the Township that provides access between South Fileys Road and South York Road. Generally, the roadway pavement is in good condition. Near its intersection with South Fileys Road, a swale runs along the north side of the roadway, causing a safety hazard. The north side of the roadway should be graded at a 3:1 slope with the swale relocated to the bottom of slope.

⁶July 1998, the Board of Supervisors awarded a contract to pave Autumn Drive and address the manhole issues.

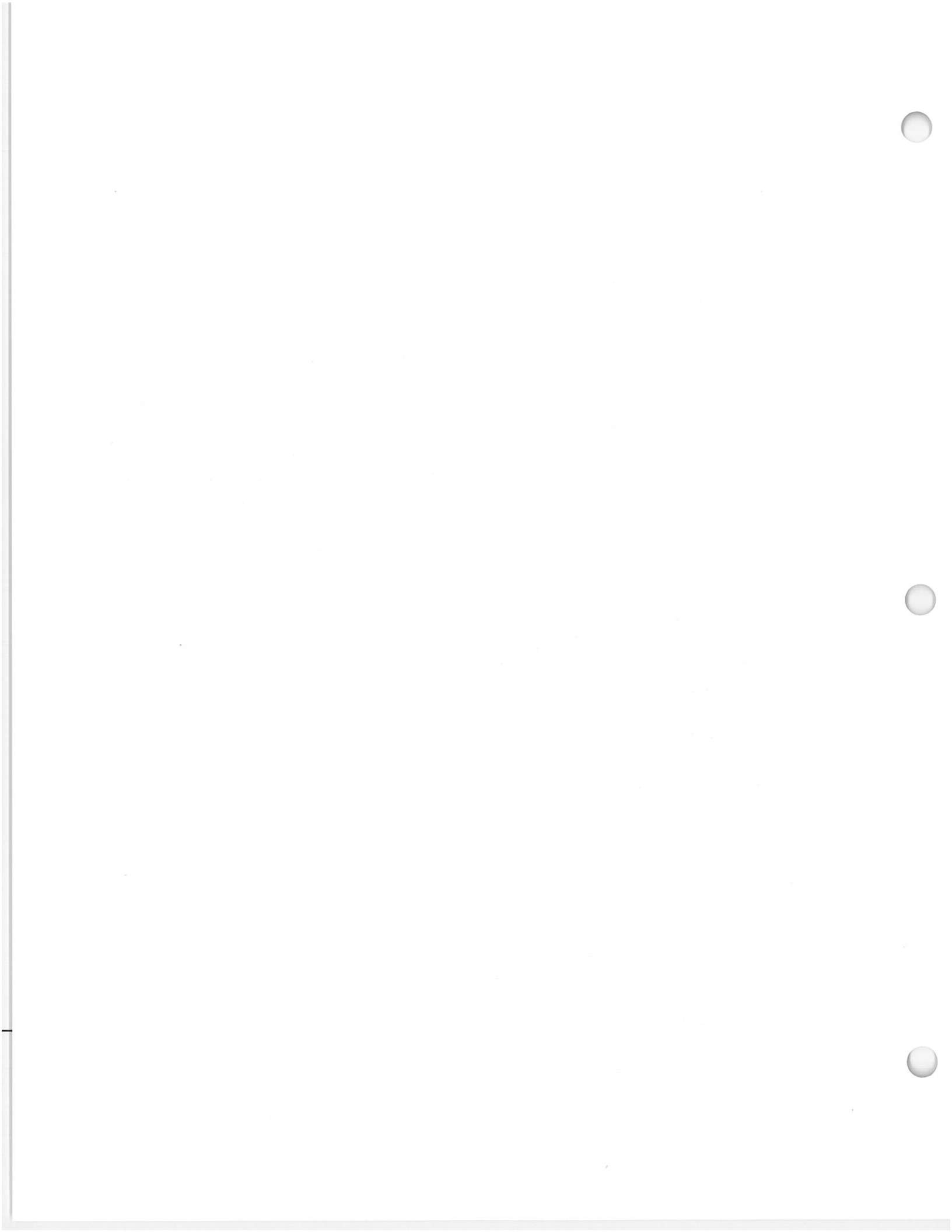


Table AIII-1

MONAGHAN TOWNSHIP-OWNED ROADS				
Street Name	Cartway Width	Length	Surface	Condition
Al-Pat Drive	14' - 16'	0.26	Bituminous	Fair
Autumn Drive	30'	0.52	Bituminous/Curbed	Fair
Big Oak Road	19'	1.71	Bituminous	Good
Bishop Road	14' - 17'	0.36	Bituminous	Fair
Dorseys Lane	18'	0.38	Bituminous	Good
Elicker Road	14' - 16'	0.45	Bituminous	Poor
Fileys Road (N)	14' - 16'	0.81	Bituminous	Good
Fishers Run Road	18'	0.36	Bituminous	Good
Gilbert Road	14' - 16'	1.08	Bituminous	Fair
Grantham Road (N)	16' - 18'	1.49	Bituminous	Good
Grantham Road (S)	13' - 17'	1.09	Bituminous	Fair
Hall Drive	30'	0.11	Bituminous	Good
Lewisberry Road (N)	13' - 17'	1.61	Bituminous	Fair
Locust Lane	16' - 18'	0.98	Bituminous	Good
Manor Drive	20'	0.50	Bituminous	Good
Meadow Trail	16' - 18'	1.37	Bituminous	Fair
Mountain Road	16' - 18'	1.32	Bituminous	Good
Mowery Road	14' - 16'	0.21	Bituminous	Poor
Mt. Airy Road (E)	16' - 18'	2.76	Bituminous	Good
Mt. Airy Road (W)	16' - 18'	0.27	Bituminous	Good
Orchard Drive	16' - 18'	0.72	Bituminous	Poor
Ridge Road (E)	16' - 18'	1.66	Bituminous	Good
Ridge Road (W)	16' - 18'	0.88	Bituminous	Good



MONAGHAN TOWNSHIP-OWNED ROADS				
Street Name	Cartway Width	Length	Surface	Condition
Sawmill Road	18'	1.20	Bituminous	Good
Seasons Drive (N)	30'	0.33	Bituminous/Curbed	Fair
Seasons Drive (S)	30'	0.28	Bituminous/Curbed	Good
Siddonsburg Road (E)	18' - 21'	1.35	Bituminous	Fair
Spring Circle	30'	0.04	Bituminous/Curbed	Good
Stony Road	12' - 14'	0.29	Dirt/Stone	Poor
Stony Run Road ⁷	14' - 16'	0.97	Bituminous	Fair
Summer Drive	30'	0.24	Bituminous/Curbed	Fair
Summit Drive	27'	0.17	Bituminous/Curbed	Good
Terrace Drive (N)	30'	0.06	Bituminous/Curbed	Fair
Terrace Drive (S)	16'	0.65	Bituminous	Fair
Wharf Road (N)	12' - 14'	0.66	Dirt/Stone	Poor
Wharf Road (S) ⁸	16' - 18'	0.87	Dirt/Stone	Fair
Winter Drive	30'	0.15	Bituminous/Curbed	Good

Additionally, advisory speeds should be posted on curves west of Fishers Run Road. To the east curve warning signs should be posted.

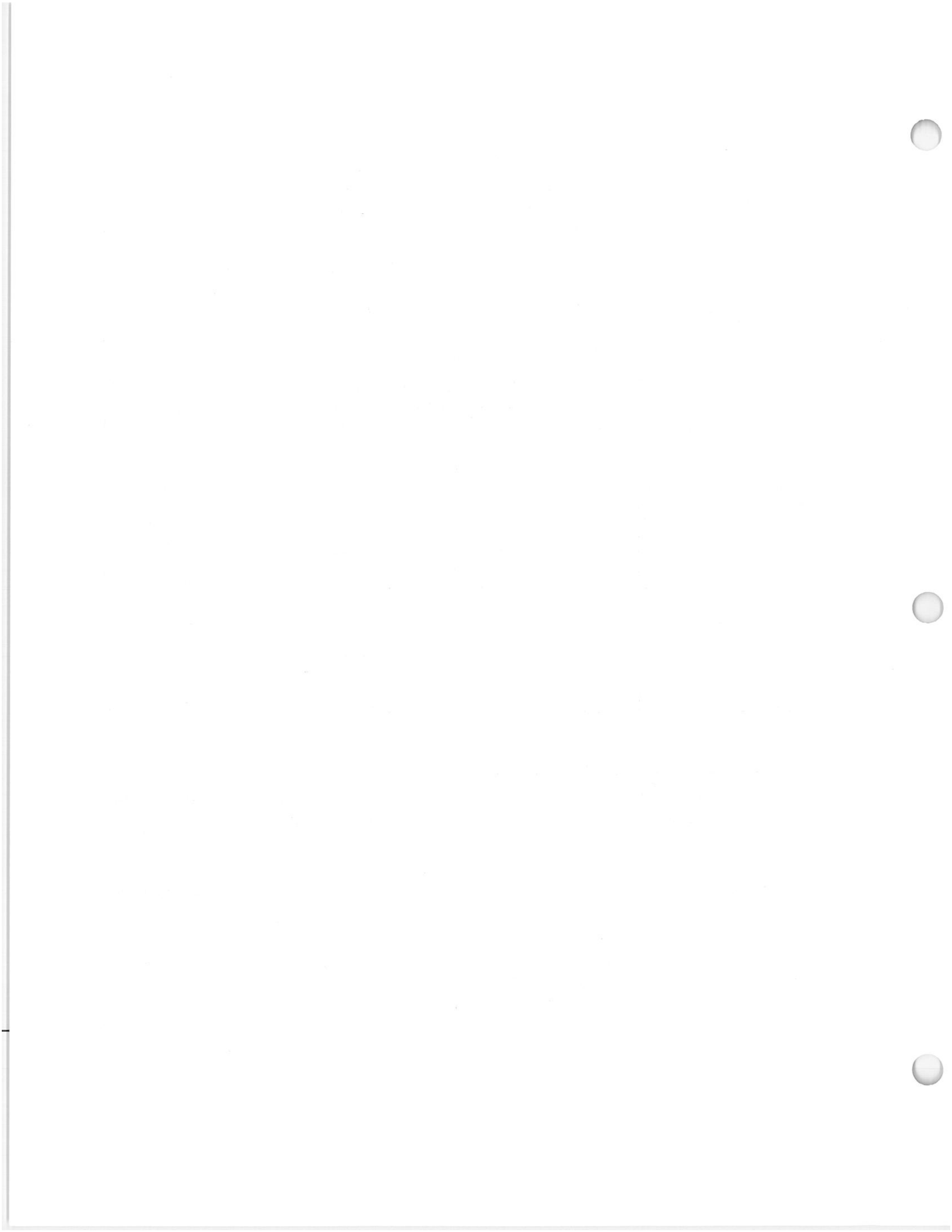
Bishop Road is located in the north-western portion of the Township and is generally in fair condition. The bridge crossing the Yellow Breeches Creek currently facilitates only one (1) lane of traffic. An additional safety risk is posed by the fact that sight distance across the bridge is restricted due to the horizontal and vertical

curvature of the roadway. If the volume of traffic increases beyond current levels, the bridge should be widened to accommodate two (2) way traffic.

Dorsey's Lane serves residences in the south-west portion of the Township and also in neighboring Carroll Township. In general, the pavement is in good condition. At its intersection with South Fileys Road, sight distance is restricted for eastbound vehicles on Dorseys Lane looking right.

⁷West of North Fileys Road, Stony Run Road is dirt/stone and is in poor condition.

⁸East of Andersontown Road, South Wharf Road is dirt/stone and is in poor condition.



Shrubbery on the southwest corner should be cut back or removed to ensure adequate sight distance. Field observations indicate that stormwater accumulates along the edge of the roadway.

Elicker Road. The pavement is in poor condition due to extensive potholes and cracking along the roadway. At its intersection with East Mount Airy Road, sight distance is restricted for a southbound vehicle on Elicker Road looking left, due to a crest vertical curve on East Mount Airy Road east of the intersection. A "Hidden Entrance" sign is posted on East Mount Airy Road for westbound vehicles prior to the intersection.

North Fileys Road is currently in good condition. At its intersection with West Siddonsburg Road, sight distance is restricted for northbound vehicles looking right and southbound vehicles looking left, due to a crest vertical curve on West Siddonsburg Road east of the intersection. An intersection warning sign is posted on West Siddonsburg Road for westbound vehicles approaching the intersection.

South Fileys Road is a state roadway located in the southwest quadrant of the Township. There is poor sight distance at the intersection of South Fileys Road and West Siddonsburg Road, due to a vertical curve on West Siddonsburg Road. There also appears to be a narrow roadway alignment past Fileys Christ Lutheran Church.

Fishers Run Road is currently in good condition. Near its intersection with Sawmill Road, a sharp, reverse curve exists. Curve warning signs and advisory speeds should be posted. At its intersection with Big Oak Road, a broken double yellow centerline should be extended through the intersection to provide better lane definition for people continuing through the intersection.

Gilbert Road is located in the northwestern quadrant of the Township. The roadway is currently in fair condition. The bridge crossing the Yellow Breeches Creek currently facilitates only one (1) lane of traffic. An additional safety risk is posed by the fact that sight distance across the bridge is restricted due to the horizontal and vertical curvature of the roadway. The bridge should be widened to accommodate two (2) way vehicular traffic. Just south of the bridge, guiderail should be installed along the west side of the roadway due to the creek adjacent to the roadway.

North Grantham Road provides access between West Siddonsburg Road and the northwestern portion of the Township. In general, the roadway is in good condition. Near its intersection with Al-Pat Drive, the 90° curve in the road should be posted with curve warning signs and advisory speed signs. Additionally, sight distance is restricted over the bridge crossing Stony Run Creek. The bridge should be widened to accommodate two (2) way traffic. In the interim, one (1) lane bridge signs should be posted on the approaches to the bridge. Finally, guiderail should be provided along the roadway, as necessary, in areas where obstructions and/or steep slopes are adjacent to the roadway.

South Grantham Road provides access to residences south of West Siddonsburg Road and west of South York Road. Advisory speed signs should be posted for sharp horizontal curves along the roadway. Additionally, at the intersection of South Grantham Road and West Mount Airy Road, vegetation and embankment on the southeast corner should be cut back to improve sight distance. Field observations indicate that stormwater ponds on the roadway.



Hall Drive provides access to a small residential development off of North Grantham Road and terminates in a cul-de-sac. At its intersection with North Grantham Road, trees should be trimmed on the southwest corner to improve visibility of the stop sign. Additionally, vegetation on the northwest corner should be trimmed to improve visibility.

North Lewisberry Road is located in the northeast quadrant of the Township and provides access between East Siddonsburg Road and Bishop Road. The roadway is generally in fair condition.

South Lewisberry Road is a state road located in the eastern portion of the Township. Near the Fairview Township Line, the roadway pavement is in poor condition. Additionally, the roadway and shoulders should be widened in this area. Field observations indicate that stormwater accumulates along the south side of the roadway. Finally, guiderail or curbing if appropriate should be provided along the roadway, as necessary, in areas where obstructions and/or steep slopes are adjacent to the roadway.

Locust Lane is located in the central portion of the Township and provides access to residences between Sawmill Road and South York Road. In general, the roadway is in good condition. At its intersection with Sawmill Road, sight distance is restricted for southbound vehicles on Locust Lane, looking east and west, due to the embankment on the northeast and northwest corners. Vegetation and the embankments on these corners should be cut back to ensure sufficient sight distance.

Manor Drive is located in the central portion of the Township and provides access to residences between Meadow Trail and North York Road. The roadway is newly paved and in good condition.

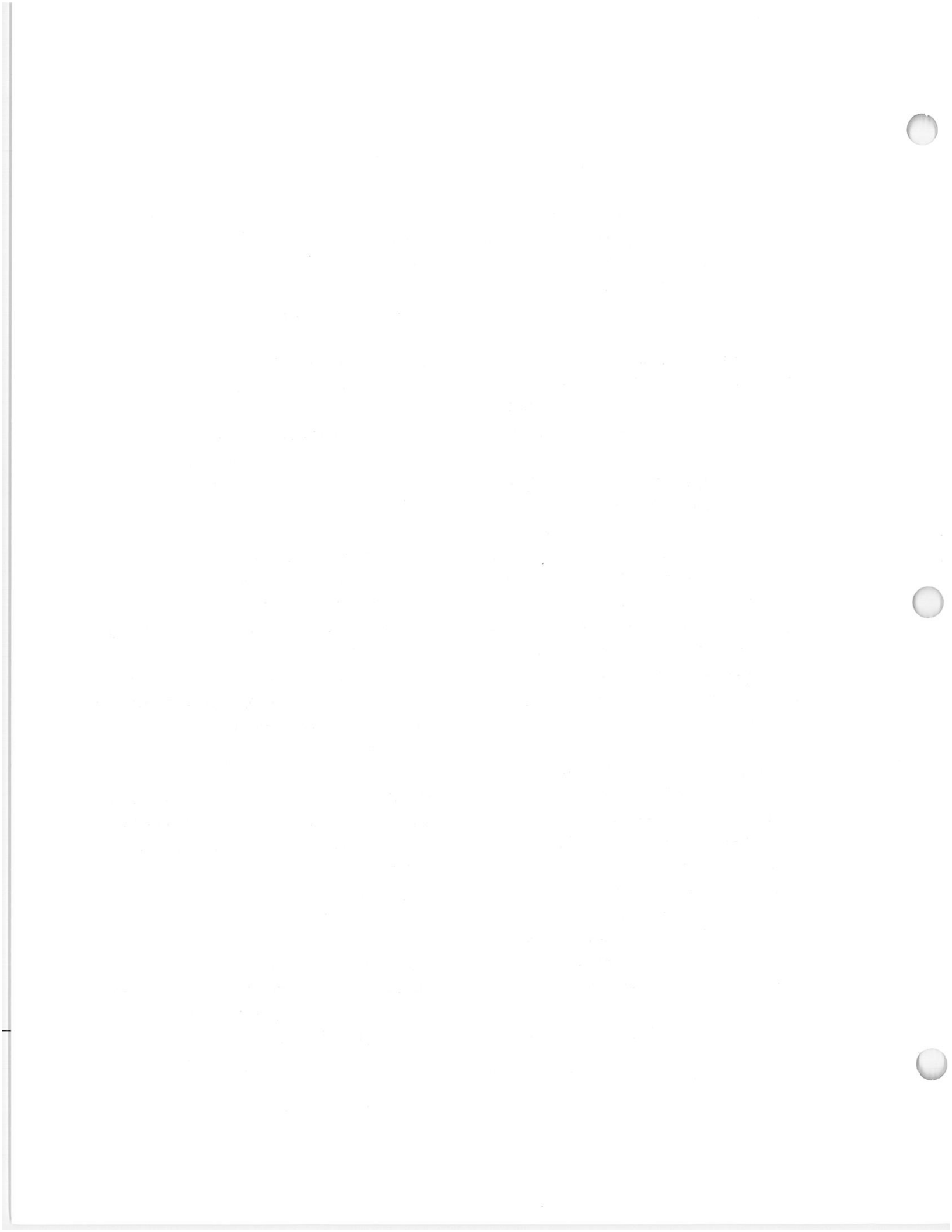
The 90° curve on Manor Drive should be posted with curve warning signs and advisory speed signs. At its intersection with Meadow Trail, sight distance is restricted for a vehicle on Manor Drive looking east due to a sag vertical curve east of the intersection. An intersection warning sign should be posted on Meadow Trail for westbound vehicles in advance of the intersection.

Meadow Trail provides access between South Lewisberry Road and South York Road. In general, the roadway is in fair condition. Near its intersection with Manor Drive, the shoulder cross slope on the north side of the roadway is excessive, posing a hazard to vehicles that veer off the roadway.

Mountain Road is located in the eastern portion of the Township. At its intersection with East Ridge Road, a broken double yellow centerline should be extended along Mountain Road, through the intersection, to provide better lane definition for people continuing through the intersection. Additionally, curve warning signs and advisory speeds should be placed along the roadway where appropriate.

Mowery Road is located in the northern portion of the Township. At its intersection with North York Road, vegetation on the southwest and southeast corners and the embankment on the southwest corner should be cut back to improve sight distance at the intersection.

East Mt. Airy Road provides access between the southeastern quadrant and the central portion of the Township. At its intersection with Mountain Road, sight distance is restricted by the embankment on the northwest corner. The embankment should be cut back to ensure adequate sight distance for vehicles on Mountain Road. At



its intersection with South York Road, vegetation on the northeast corner should be cut back to increase sight distance for westbound vehicles on Mt. Airy Road looking north. At its intersection with East Ridge Road, a broken double yellow centerline should be carried through the intersection to provide better definition.

West Mt. Airy Road provides access between South York Road and South Grantham Road. The roadway is generally in good condition.

Orchard Drive provides access between East Mount Airy Road and South York Road. Orchards and agricultural uses line both sides of the roadway. The pavement is in poor condition.

East Ridge Road is located in the southeastern quadrant of the Township. Guiderail should be installed or culverts lengthened in areas where culverts cross under the roadway.

West Ridge Road is located in the southern portion of the Township and provides access between South York Road and neighboring Carroll Township. The roadway is in generally good condition.

Sawmill Road provides access between South Fileys Road and South York Road. Near its intersection with South York Road, a swale runs adjacent to the south side of the roadway. Shoulder improvements should be considered in this area.

North Seasons Drive provides access to Memphord Estates. The roadway is in fair condition due to moderate cracking and some potholes. Additionally, in some cases, the

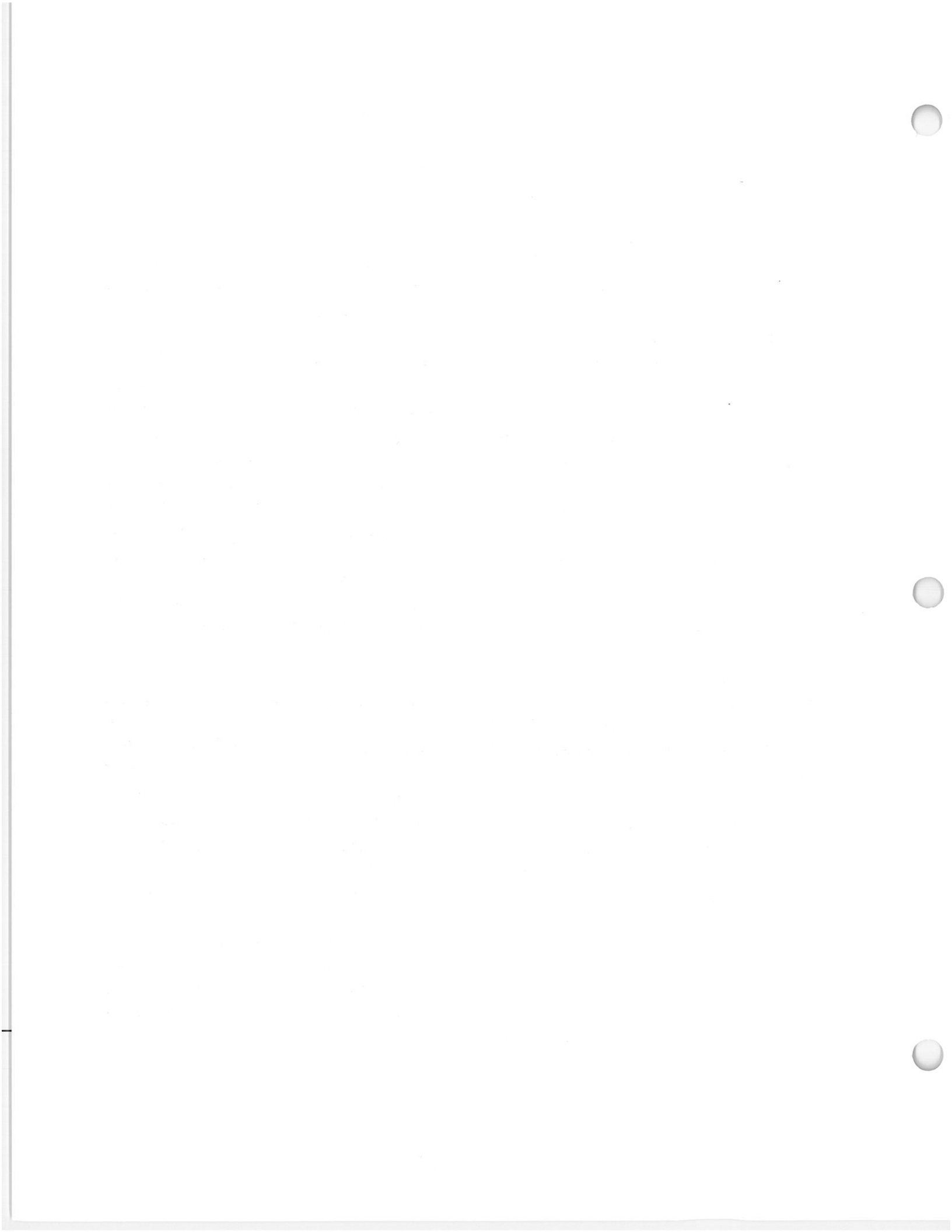
pavement is not flush with manhole covers⁹. The roadway is adequate in width and has concrete curb on both sides.

South Seasons Drive provides access to Memphord Estates. The roadway is fairly new and in good condition. Additionally, the roadway is adequate width with concrete curbs on both sides.

East Siddonsburg Road, along with West Siddonsburg Road, is the primary east-west roadway through the Township and is state owned and maintained between York Road and Lewisberry Road and Township-owned and maintained between Lewisberry Road and Andersontown Road. At its intersection with Wharf Road, vegetation on the northeast and southwest corners and the embankment on the northwest corner should be cut back to improve sight distance. Additionally, advisory speeds should be posted on sharp horizontal curves east of Lewisberry Road.

West Siddonsburg Road, along with East Siddonsburg Road, is the primary east-west roadway through the Township and is State-owned and maintained. West of York Road drainage problems exist on the south side of the roadway causing water to pond adjacent to the roadway. The shoulders and roadside area should be upgraded. Due to the close proximity of houses to the roadway, widening of the roadway may not be feasible near York Road. West of Terrace Drive curve warning signs and advisory speed signs should be posted for the 90° horizontal curve. There is poor sight distance at the intersection of South Fileys Road due to a vertical curve on West Siddonsburg Road.

⁹July 1998, the Board of Supervisors awarded a contract to pave North Seasons Drive and address the manhole issues.



Spring Circle serves dwellings within Memphord Estates. The roadway is fairly new and is in good condition. Additionally, the roadway is adequate in width and has concrete curb on both sides. Spring Circle terminates in a cul-de-sac.

Stony Road is located in the eastern portion of the Township and runs from Mountain Road east, into Fairview Township. Currently, the roadway is unimproved with a dirt and stone surface. The cartway is extremely narrow and cannot accommodate two (2) way traffic. If traffic volume increases, the roadway should be widened.

Stony Run Road is located in the northeastern quadrant of the Township. West of North Fileys Road, the roadway is unimproved with a dirt and stone surface. The cartway is extremely narrow and cannot accommodate two (2) way traffic. The roadway should be widened and paved if the traffic volume increases. East of North Fileys Road, the roadway is in fair condition, but is still insufficient in width. At its intersection with Gilbert Road, vegetation on the northwest corner should be cut back to improve sight distance.

Summer Drive provides access to Memphord Estates. The roadway is generally in fair condition. Also, the roadway is adequate in width and has concrete curb on both sides.

Summit Drive is located in the northwestern portion of the Township and serves a small residential area off of North Grantham Road. Since Summit Drive ends in a cul-de-sac, a "No Outlet" sign should be posted.

North Terrace Drive serves the Memphord Estates residential development. The roadway is adequate in width and has concrete curb on both sides. The roadway pavement is currently in fair condition.

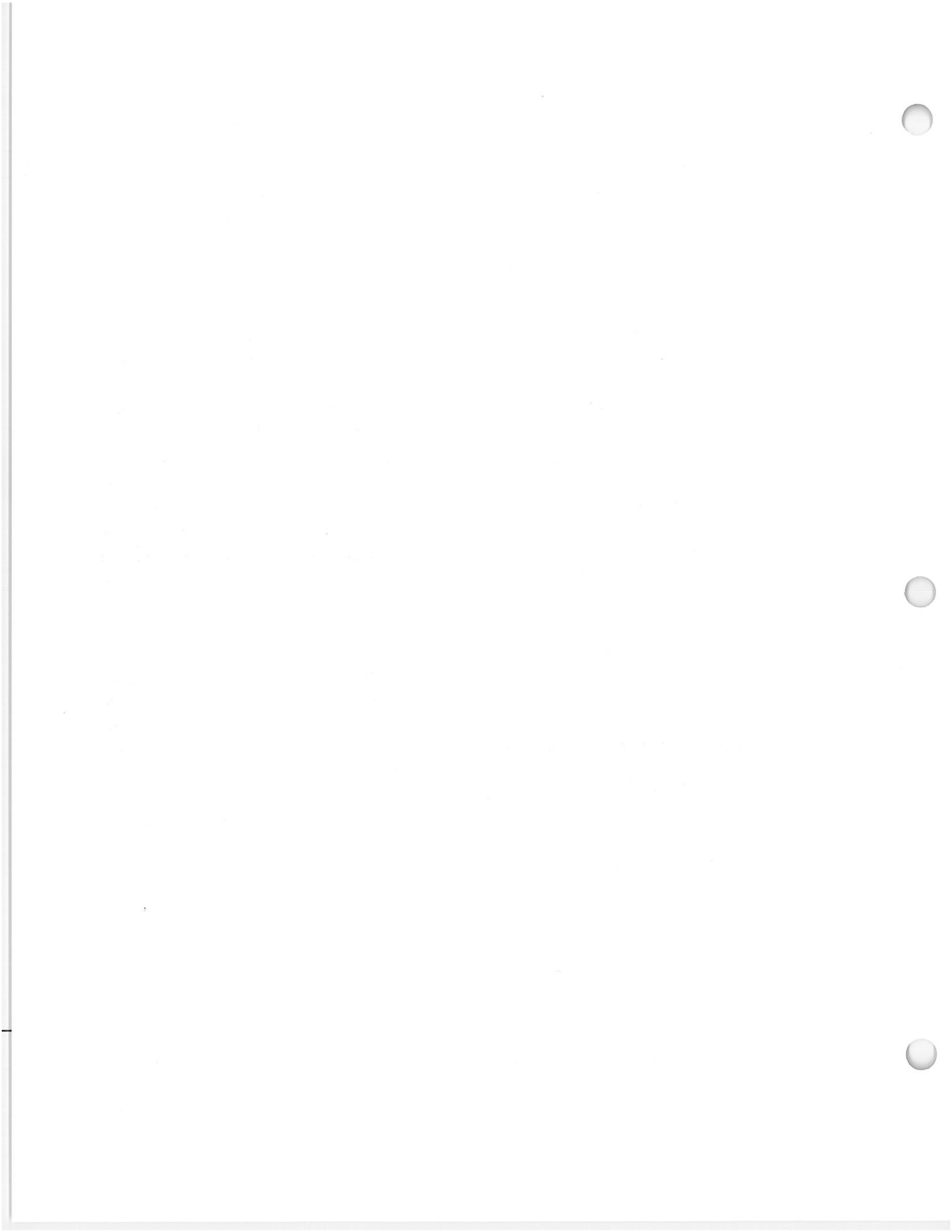
South Terrace Drive is located in the western portion of the Township and provides access between West Siddonsburg Road and South Fileys Road. The roadway is generally in fair condition and has a substandard width for two (2) lane traffic. Near South Fileys Road, curve warning signs should be posted.

North Wharf Road is currently unimproved with a dirt and stone surface. The cartway is extremely narrow and cannot accommodate two (2) way traffic. The roadway should be widened if traffic volumes increase. Based on the current roadway conditions it is our opinion that the posted twenty-five (25) mile per hour speed limit is unsafe. Finally, the bridge crossing the Yellow Breeches Creek currently facilitates only one (1) lane of traffic. An additional safety risk is posed by the fact that sight distance across the bridge is restricted due to the horizontal and vertical curvature of the roadway.

South Wharf Road is currently unimproved with a dirt and stone surface east of Andersontown Road. The two (2) bridges along this portion of roadway are one (1) lane bridges, the one near, Andersontown Road is being replaced. The cartway is insufficient for two (2) way traffic. The roadway should be widened and paved. West of Andersontown Road, the roadway is paved with bituminous materials and is in fair condition but still has a substandard width.

Winter Drive serves dwellings in Memphord Estates. The roadway is fairly new and is in good condition. Additionally, the roadway is adequate in width and has concrete curb on both sides.

North York Road is a State roadway that is the primary north-south facility in the Township. The cartway currently meets minimum width criteria for two (2) lane traffic. Shoulders and the roadside areas should be upgraded.



South York Road, along with North York Road, is a state roadway that is the primary north-south facility in the Township. The cartway currently meets minimum width criteria for two (2) lane traffic. At its intersection with West Ridge Road, the embankments on the northwest and southwest corners should be cut back to improve sight distance at the intersection. At its intersections with Sawmill Road and Locust Lane, vertical curves on South York Road, south of each intersection, restrict sight distance for vehicles pulling out of the side roads. Intersection warning signs should be posted on South York Road for northbound vehicles prior to these intersections. At its intersection with Meadow Trail, vegetation and embankment on the northeast corner should be cut back to improve sight distance. At its intersection with Manor Drive, intersection warning signs should be posted for southbound vehicles.

3. RECREATION FACILITIES

The existing recreation facilities in Monaghan Township are comprised primarily of semi-public facilities, religious facilities, and one (1) privately-owned college facility. To determine how available these facilities are to the general public, an interview was conducted with a knowledgeable representative of each facility.

A. Fire Company

The fire company building is situated on an 11.14 acre tract at the southeastern corner of South Grantham and West Siddonsburg Roads. The property has a baseball field and a picnic pavilion. The grassed baseball field is not maintained on a regular basis but is available for use by the general public. The picnic pavilion and the fire hall are also available to the public for a fee. According to Fire Chief Andrew Gibb, the fire hall is usually rented two (2) to three (3) times per week for

bingo, parties, or meetings. During general elections, the fire hall also serves as the polling station for the community. Although the fire company does not currently have any plans for expansion, the property is large enough to support an expansion of the building or the outdoor recreational features.

B. Public School Facilities

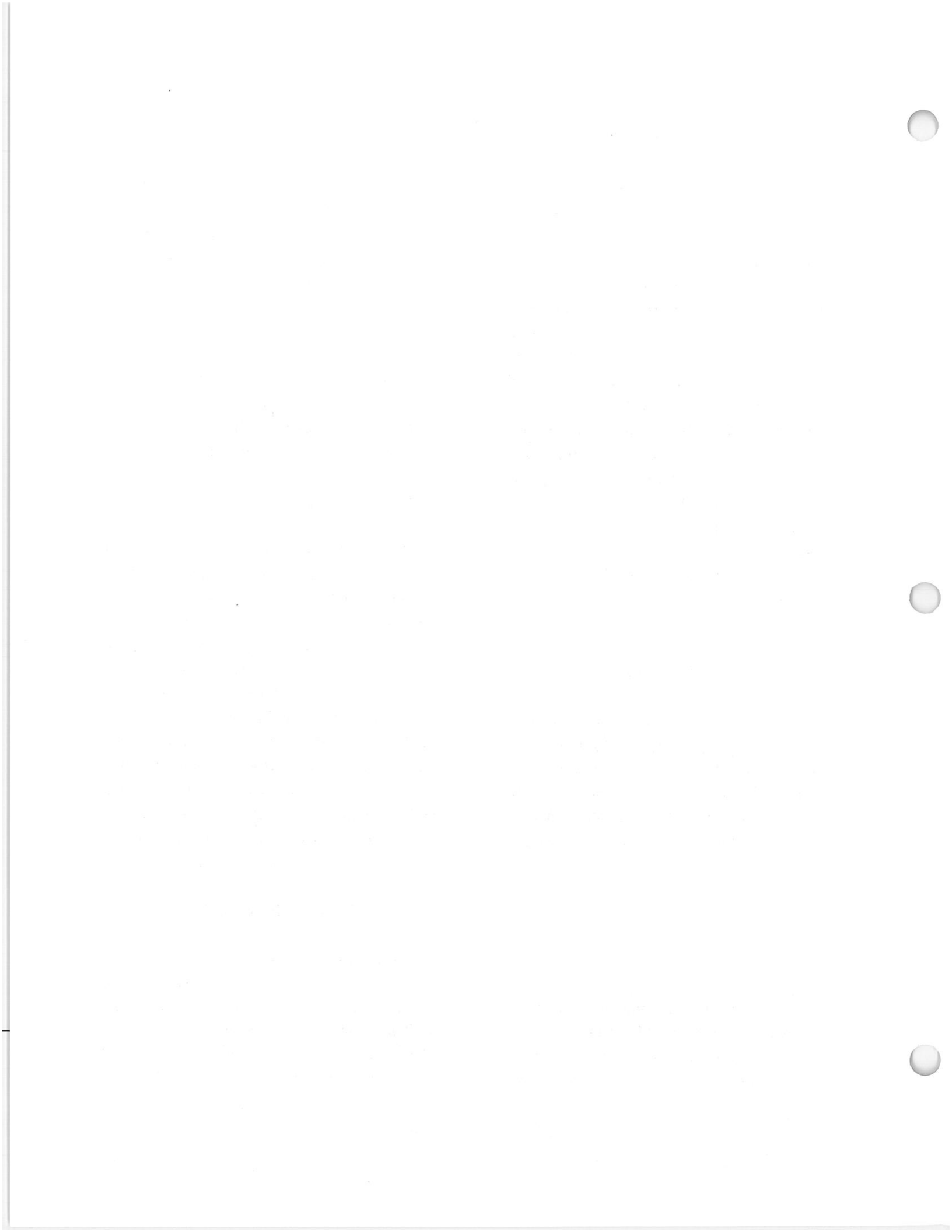
Monaghan Township is part of the Northern York School District. The School District education and administration buildings and athletic facilities are all located outside of Monaghan Township.

C. Messiah College

Messiah College is a privately owned and operated college. Most of the buildings and dormitories for the college are located in Upper Allen Township. Some of the athletic facilities, however, are located in the northwestern corner of Monaghan Township. According to Dr. Kenneth Martin, Vice President for Administration and Finance, the following recreational/athletic facilities are available to the general public on a first come first serve basis: the indoor walking/jogging area, the outdoor track, four (4) of the outdoor tennis courts, and the outdoor walking trail. Due to the conference and varsity schedule, the baseball field is available on a periodic basis only.

D. Mount Pleasant Church of God

The Mount Pleasant Church of God is located on the northwestern corner of West Mt. Airy and South York Roads, across from the Township Building. According to Pastor Phillip Sturr, the church's fellowship hall has a kitchen, a stage and a basketball/volleyball court. A baseball field is located outside. All of the facilities at the church can be rented for a fee. Use of the baseball field must be coordinated with the church's baseball league. Since the fellowship hall for the Mount



Pleasant Church of God was built only three (3) years ago, no additional plans for future expansion are being considered right now.

E. Fileys Christ Lutheran Church

Fileys Christ Lutheran Church is situated at the corner of South Fileys and West Siddonsburg Roads. The church currently has a picnic pavilion, a ballfield and a small playground for the nursery school that is operated out of the church. The ballfield can be used without charge by any member of the community. A master plan evaluating how the church's facilities can best be expanded to fulfill the needs of the congregation is being completed. Depending upon the recommendation of the completed study, the church may remove the ballfield and construct a gymnasium/fellowship hall or they may expand the existing church building. Pastor David Smith has indicated that all facilities will be available for the use of the Township.

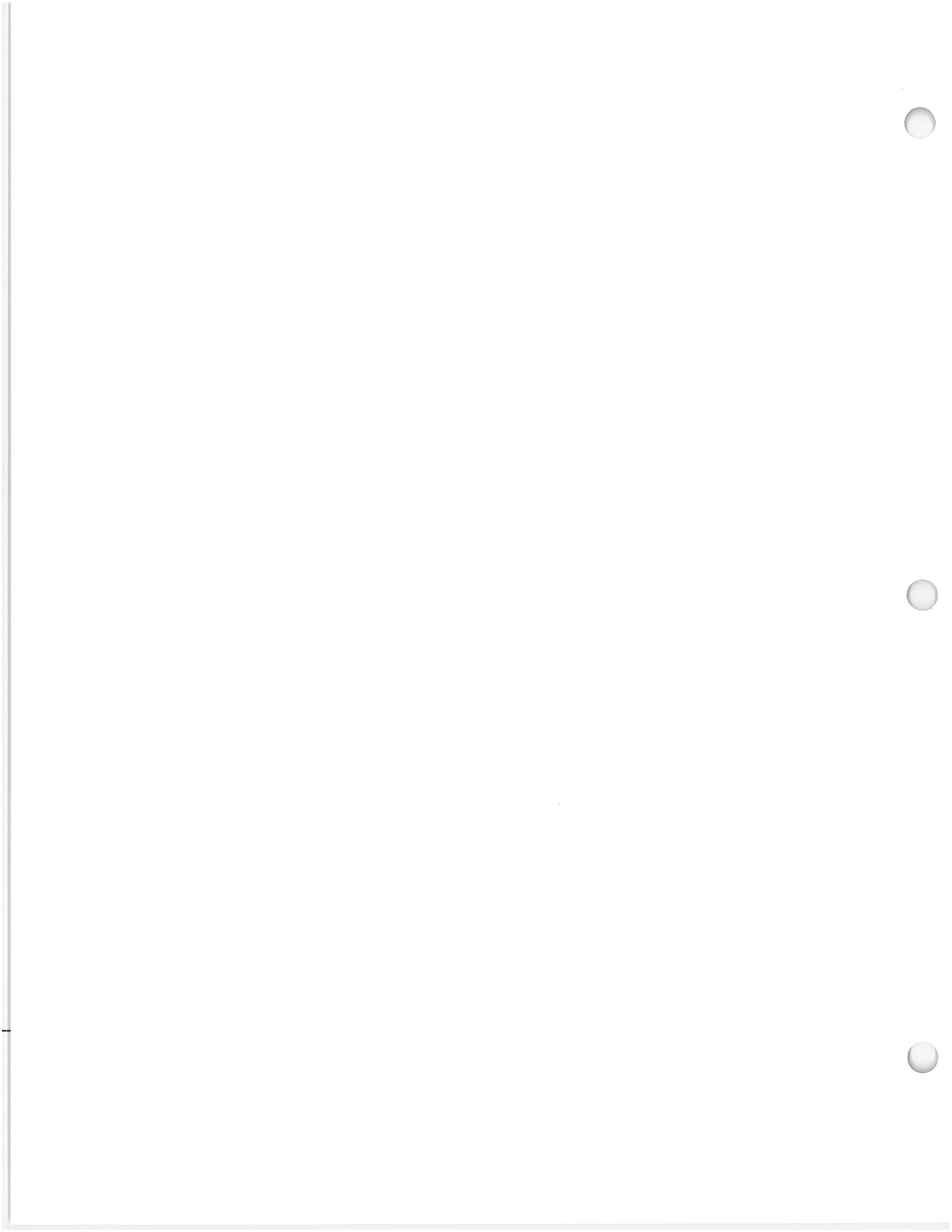
In conclusion, all of the recreation facilities in Monaghan Township have been constructed to serve special interest groups within the community. Although the facilities are generally available to the community for a nominal fee, recurring activities or events or spontaneous use of the facilities by someone outside the special interest group is generally not possible. Restrictions exist with regard to the types of activities that can be pursued at each of the facilities. All of the existing outdoor athletic facilities, with the exception of the facilities at Messiah College, are baseball or softball fields.

There does appear to be a lack of public parks and open space within the Township. The National Recreation and Park Association suggests that the community needs a core park system of approximately ten (10) acres of developed

recreation space per one thousand (1,000) population. For Monaghan Township, this would equate to approximately twenty-five (25) acres of park land with a variety of active and passive functions.

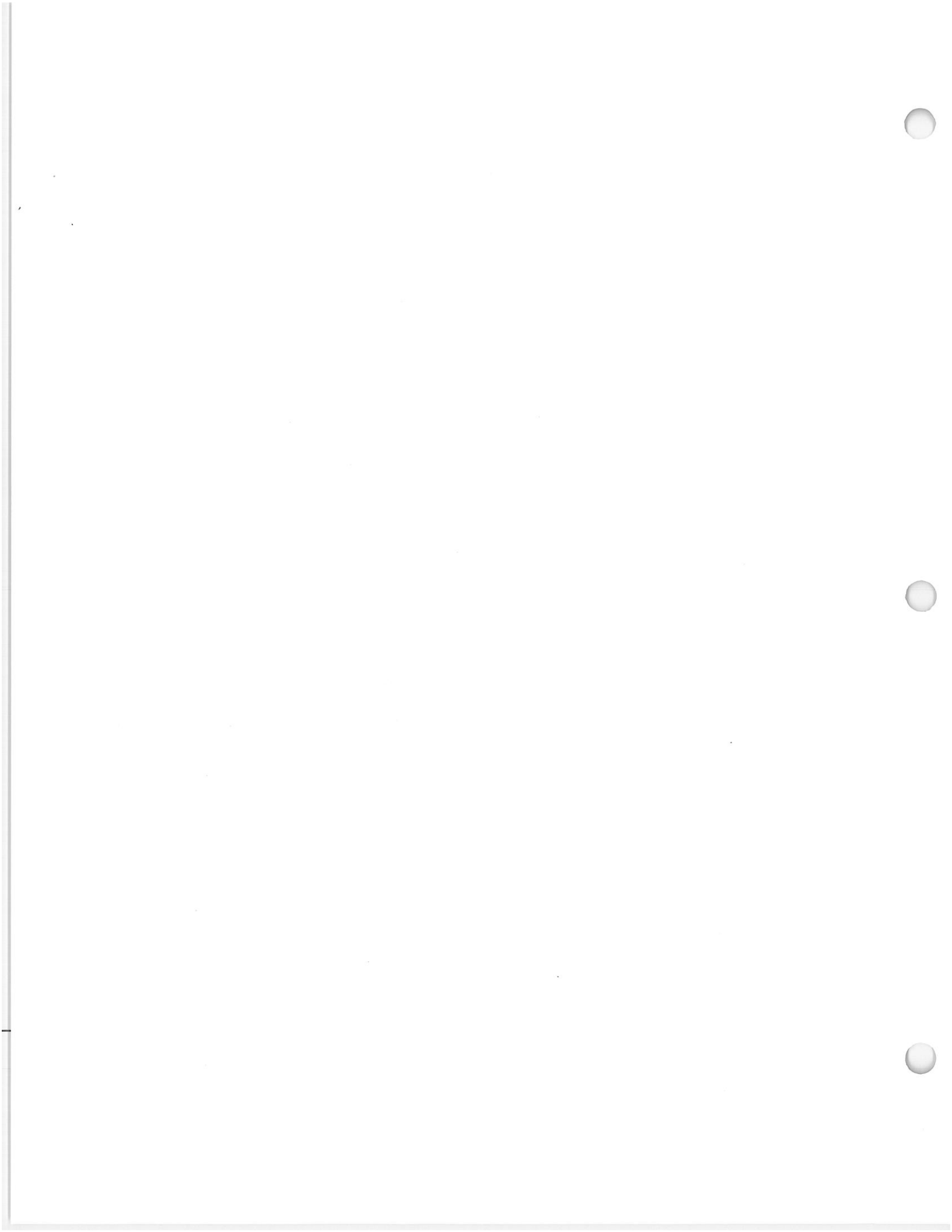




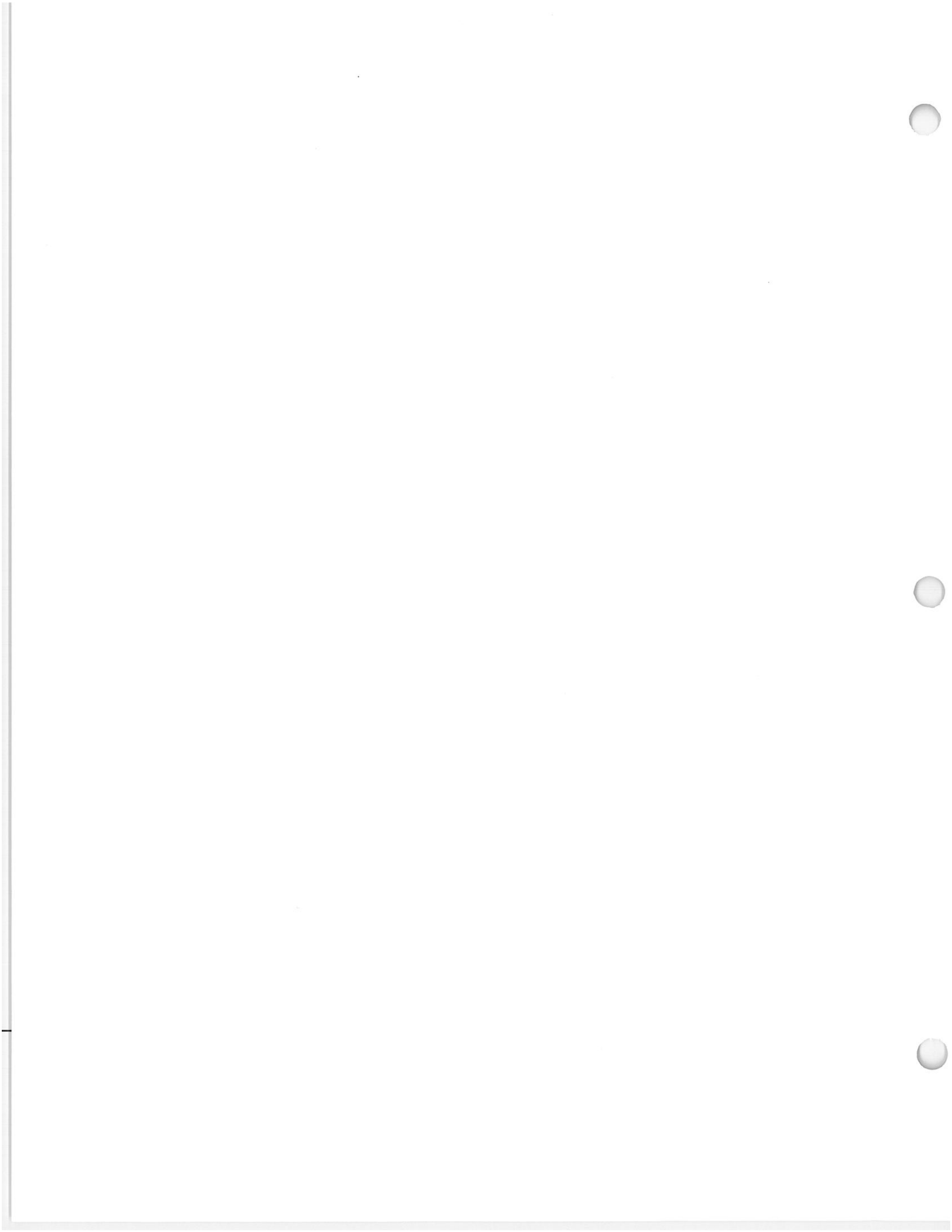


APPENDIX IV

Growing Greener





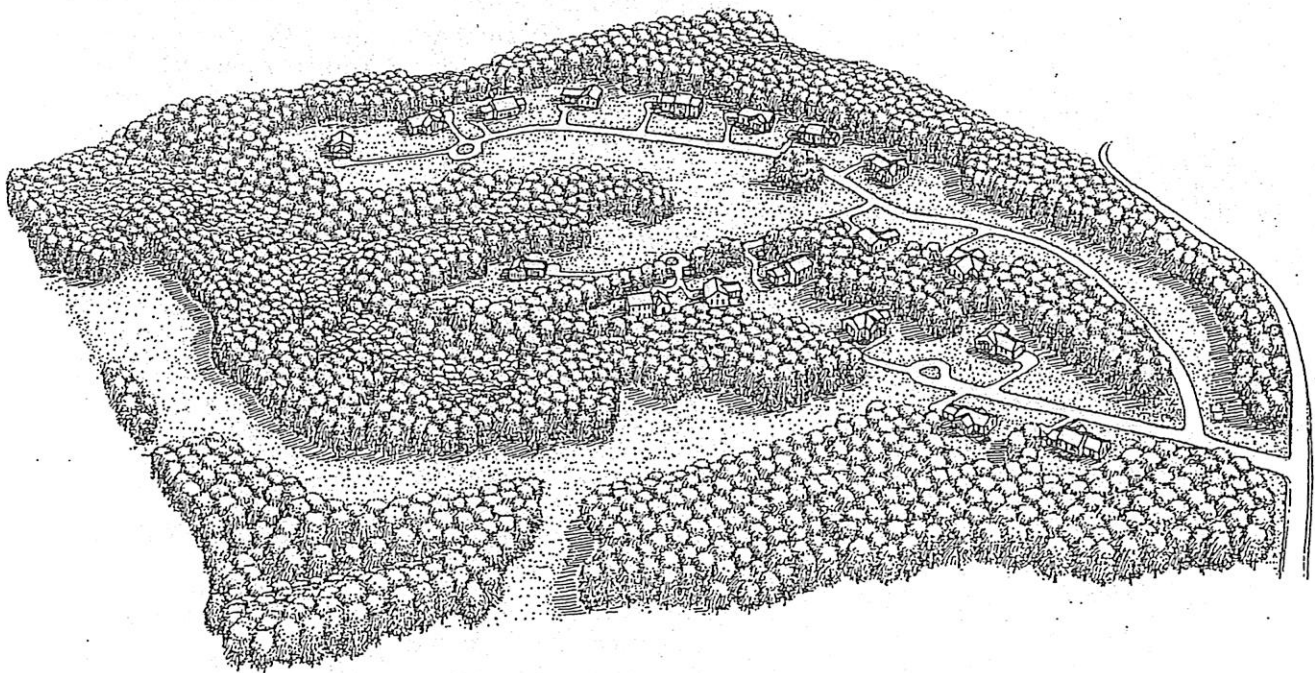


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Growing Greener

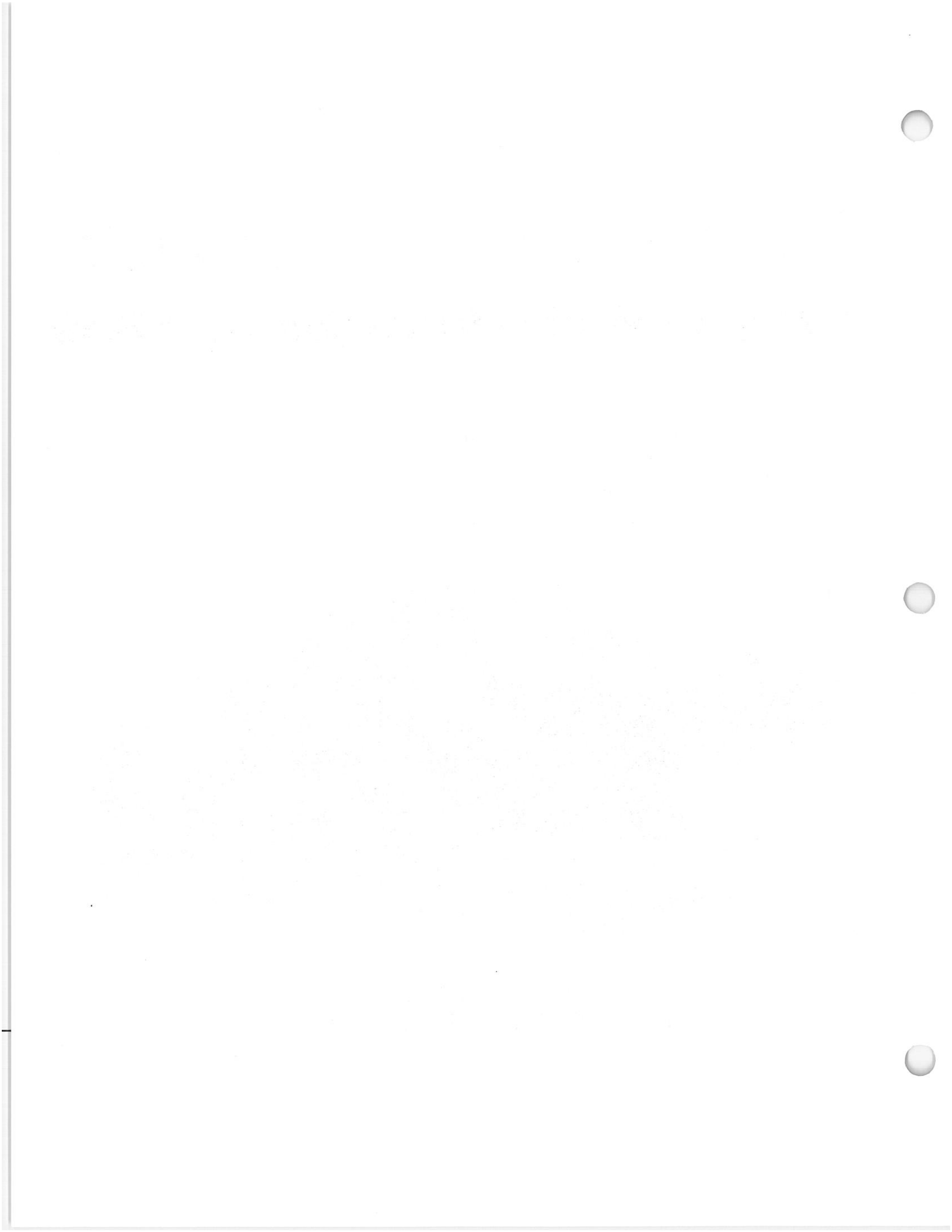
PUTTING CONSERVATION INTO LOCAL CODES

Communities across Pennsylvania are realizing that they can conserve their special open spaces and natural resources *at the same time* they achieve their development objectives. The tools? Conservation zoning and conservation subdivision design, an approach we're calling *Growing Greener*.



These *Growing Greener* tools are illustrated in the above subdivision, where the developer builds the maximum number of homes permitted under the municipality's zoning, while at the same time permanently protecting over half of the property. The open space is then added to an interconnected network of community greenspaces.

If you want your community to take control of its destiny and ensure that new development creates more livable communities in the process, the *Growing Greener* approach might be right for you.



Introduction

This booklet summarizes how municipalities can use the development process to their advantage to protect interconnected networks of open space: natural areas, greenways, trails and recreational land. Communities can take control of their destinies so that their conservation goals are achieved in a manner fair to all parties concerned. All that is needed are some relatively straight-forward amendments to municipal comprehensive plans, zoning ordinances, and subdivision ordinances. These steps are described in the sections that follow.

Growing Greener is a collaborative effort of the Pennsylvania Department of Conservation and Natural Resources, Natural Lands Trust, Pennsylvania State University Cooperative Extension and an advisory committee comprised of officials from the Department of Community and Economic Development, Center for Rural Pennsylvania, Lycoming County Planning Commission, Pennsylvania Environmental Council, Pennsylvania Planning Association and Department of Environmental Protection.

During 1997, Natural Lands Trust conducted

three *Growing Greener* pilot workshops hosted by the Centre County Planning Commission, Centre Region Planning Agency, Tri-County Regional Planning Commission and the Union County Planning Commission. Our focus during 1998 will be helping county planning agencies and other planning organizations build their capacity to help the communities they work with realize their conservation goals. In order to assist them, Natural Lands Trust has developed multi-media educational materials available for use by community planners across the state. We invite county planning agencies and interested planning consultants and conservancies to join us as *Growing Greener* partners.

How do I learn more?

For more information contact:



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fax (610) 353-0517

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November 1997



The Conservation Design Concept

Each time a property is developed into a residential subdivision, an opportunity exists for adding land to a community-wide network of open space. Although such opportunities are seldom taken in many municipalities, this situation could be reversed fairly easily by making several small but significant changes to three basic local land-use documents—the comprehensive plan, the zoning ordinance and the subdivision and land development ordinance. Simply stated, Conservation Design rearranges the development on each parcel as it is being planned so that half (or more) of the buildable land is set aside as open space. Without controversial “down zoning,” the same number of homes can be built in a less land-consumptive manner, allowing the balance of the property to be permanently protected and added to an interconnected network of community green spaces. This “density-neutral” approach provides a fair and equitable way to balance conservation and development objectives.

Four Keys to Conservation

Communities protect open space because it protects streams and water quality, provides habitat for plants and animals, preserves rural “atmosphere,” provides recreational areas, protects home values and reduces costs of municipal services. In short, land conservation makes your community a better place to live. Four basic actions underlie the *Growing Greener* process:

1 Envision the Future: Performing “community audits.” Successful communities have a realistic understanding of their future. The audit projects past and current development trends into the future so that officials and residents may easily see the long-term results of con-

tinuing with current ordinance provisions. Communities use this knowledge to periodically review and adjust their goals and strategies for conservation and development.

2 Protect Open Space Networks Through Conservation Planning.

Successful communities have a good understanding of their natural and cultural resources. They establish reasonable goals for conservation and development—goals that reflect their special resources, existing land use patterns and anticipated growth. Their comprehensive plans document these resources, goals and policies. The plan contains language about the kinds of

ordinance updating and conservation programs necessary for those goals to be realized. A key part of the Comprehensive Plan is a *Map of Potential Conservation Lands* that is intended to guide the location of open space in each new subdivision as it is being laid out.

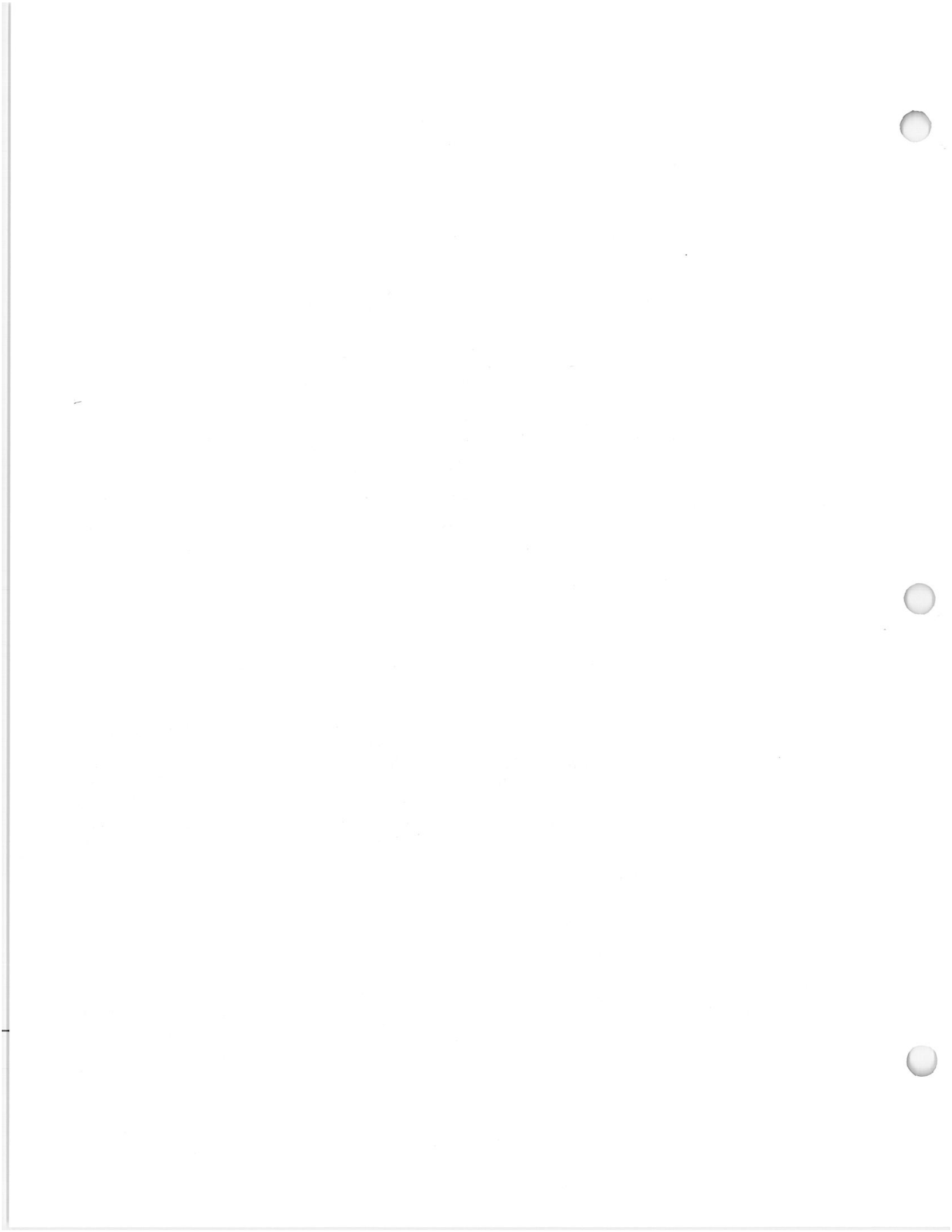
3 Conservation Zoning: A “Menu of Choices.”

Successful communities have legally defensible, well-written zoning regulations that meet their “fair share” of future growth and provide for a logical balance between community goals and private landowner interests. They incorporate resource suitabilities, flexibility, and incentives to require the

inclusion of permanent conservation lands into new subdivisions. The five zoning options summarized in this publication and described in detail in the *Growing Greener* manual respect the private property rights of developers without unduly impacting the remaining natural areas that make our communities such special places in which to live, work, recreate and invest in.

4 Conservation Subdivision Design: A Four-Step Process.

Successful communities recognize that both design standards and the design process play an important part in conserving community resources. Such communities adopt subdivision codes which require detailed site surveys



and analyses identifying the special features of each property, and introduce a simple methodology showing how to lay out new development so that the majority of those special features will be permanently protected in designated conservation areas or preserves. To a

considerable extent, those preserves within new subdivisions can be pre-identified in the Comprehensive Plan so that each such area will form an integral part of a community-wide network of protected open space, as noted above.

1 Envisioning the Future

Performing "Community Audits"

The "community audit" visioning process helps local officials and residents see the ultimate result of continuing to implement current land-use policies.

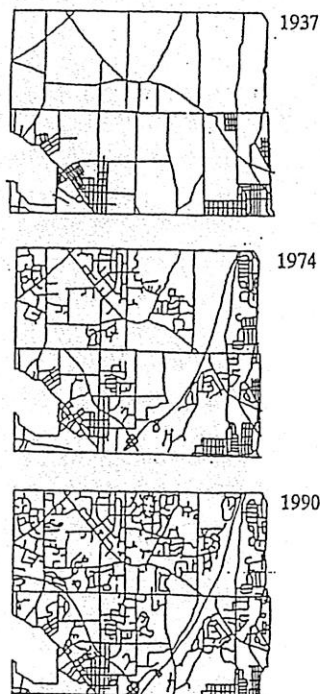


Figure 1
The pattern of "wall-to-wall subdivisions" that evolves over time with zoning and subdivision ordinances which require developers to provide nothing more than houselots and streets.

The process helps start discussions about how current trends can be modified so that a greener future is ensured.

Sad but true, the future that faces most communities with standard zoning and subdivision codes is to witness the systematic conversion of every unprotected acre of buildable land into developed uses.

Most local ordinances allow or encourage standardized layouts of "wall-to-wall houselots." Over a period of decades this process produces a broader pattern of "wall-to-wall subdivisions" (see Figure 1). No community actively plans to become a bland suburb without open space. However, most zoning codes program exactly this outcome.

Municipalities can perform audits to see the future before it happens, so that they will be able to judge whether a mid-course correction is needed. A community audit entails:

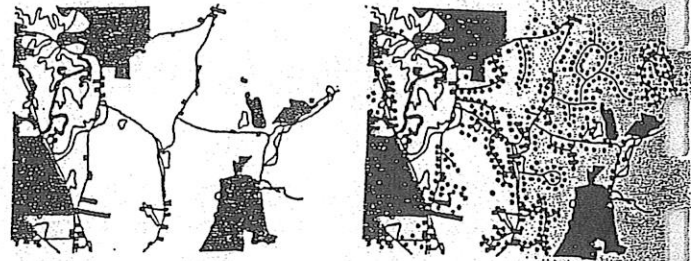


Figure 2
A matching pair of graphics, taken from an actual "build-out map," show existing conditions (mostly undeveloped land) contrasted with the potential development pattern of "checkerboard suburbia" created through conventional zoning and subdivision regulations.

Numerical Analysis of Development Trends.

The first step involves a numerical analysis of growth projections, both in terms of the number of dwelling units and the number of acres that will probably be converted into houselots and streets under present codes.

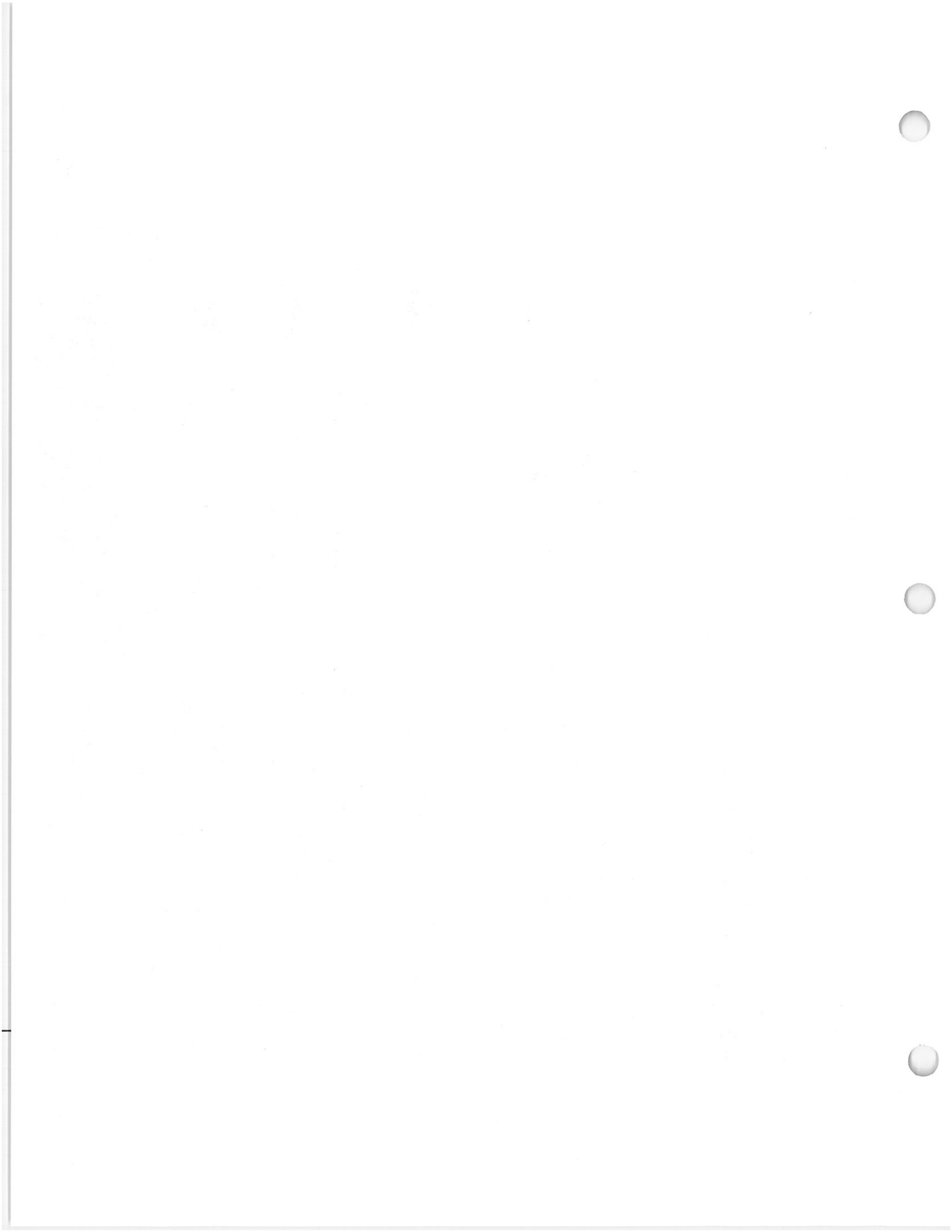
Regulatory Evaluation.

The second step consists of an evaluation of the land-use regulations that are currently on the books, identifying their strengths and weaknesses and offering constructive recommendations about how they can incorporate the conservation techniques described in this booklet. It should also include a realistic appraisal of the extent to which private conservation efforts are likely to succeed in protecting lands from development through various nonregulatory approaches such as purchases or donations of easements or fee title interests.

"Build-Out" Maps.

The third step entails mapping future development patterns on a map of the entire municipality (see Figure 2). Alternatively, the "build-out" map could focus only on selected areas in the municipality where development is of the greatest immediate concern, perhaps due to the presence of special features identified in the comprehensive plan or vulnerability due to development pressures.

The following parts of this booklet describe practical ways in which communities can take control of their destinies so that conservation goals will be achieved simultaneously with development objectives, in a manner that is fair to all parties concerned. Three interrelated documents—the Comprehensive Plan, Zoning Code and Subdivision and Land Development Code, stand together like a three-legged stool providing a balanced footing for achieving a municipality's conservation goals.



2 Protecting Open Space Networks Through Conservation Planning

Although many communities have adopted either Comprehensive Plans or Open Space Plans containing detailed inventories of their natural and historic resources, very few have taken the next logical step of pulling together all that information and creating a *Map of Potential Conservation Lands*.

Such a map is vitally important to any community interested in conserving an interconnected network of open space. The map serves as the tool which guides decisions regarding which land to protect in order for the network to eventually take form and have substance.

A *Map of Potential Conservation Lands* starts with information contained in the community's existing planning documents. The next task is to identify two kinds of resource areas. *Primary Conservation Areas* comprise only the most severely constrained lands, where development is typically restricted under current codes and laws (such as wetlands, floodplains, and slopes exceeding 25%). *Secondary Conservation Areas* include all other locally noteworthy or significant features of the natural or cultural landscape—such as mature

woodlands, wildlife habitats and travel corridors, prime farmland, groundwater recharge areas, greenways and trails, river and stream corridors, historic sites and buildings, and scenic viewsheds. These *Secondary Conservation Areas* are often best understood by the local residents who may be directly involved in their identification. Usually these resource areas are totally unprotected and are simply zoned for one kind of development or another.

A base map is then prepared on which the *Primary Conservation Areas* have been added to an inventory of lands which are already protected (such as parks, land trust preserves, and properties under conservation easement). Clear acetate sheets showing each kind of *Secondary Conservation Area* are then laid on top of the base map in an order reflecting the community's preservation priorities (as determined through public discussion).

This overlay process will reveal certain situations where two or more conservation features appear together (such as woodlands and wildlife habitats, or farmland and scenic

viewsheds). It will also reveal gaps where no features appear.

Although this exercise is not an exact science, it frequently helps local officials and residents visualize how various kinds of resource areas are connected to one another, and enables them to tentatively identify both broad swaths and narrow corridors of resource land that could be protected in a variety of ways.

Figure 3 shows a portion of a map prepared for one Chester County township which has followed this approach.

The planning techniques which can best implement

the community-wide *Map of Potential Conservation Lands* are *Conservation Zoning* and *Conservation Subdivision Design*. These techniques which work hand in hand are described in detail below. Briefly stated, conservation zoning expands the range of development choices available to landowners and developers. Just as importantly, it also eliminates the option of creating full-density "checkerboard" layouts that convert all land within new subdivisions into houselots and streets.

The second technique, "conservation subdivision design," devotes half or

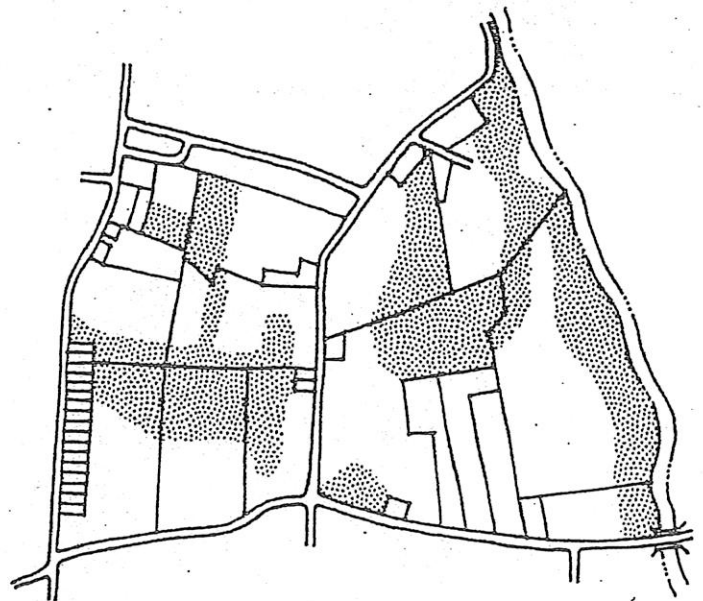
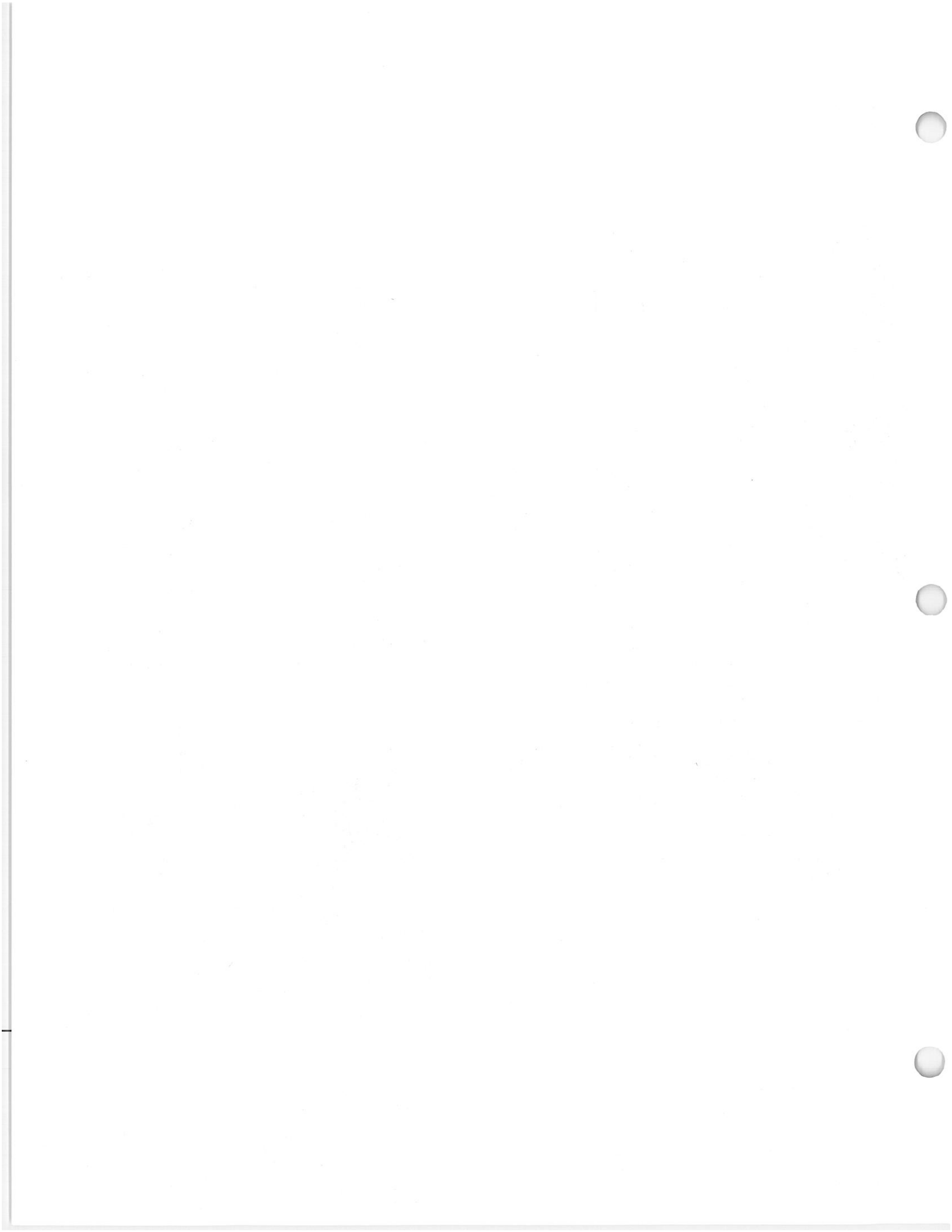


Figure 3

Part of a *Map of Potential Conservation Lands* for West Manchester Township, York County. West Manchester's map gives clear guidance to landowners and developers as to where new development is encouraged on their properties. Township officials engaged a consultant to draw, on the official tax parcel maps, boundaries of the new conservation lands network as it crossed various properties, showing how areas required to be preserved in each new development could be located so they would ultimately connect with each other. In this formerly agricultural municipality the hedgerows, woodland remnants, and the riparian buffer



more of the buildable land area within a residential development as undivided permanent open space. Not surprisingly, the most important step in designing a conservation subdivision is to identify the land that is to be preserved. By using the community-wide *Map*

of Potential Conservation Lands as a template for the layout and design of conservation areas within new subdivisions, these developments help to create an interconnected network of open space spanning the entire municipality.

Figure 4 shows how the open space in three adjoining subdivisions has been designed to connect, and illustrates the way in which the *Map of Potential Conservation Lands* can become a reality.

Figure 5 provides a bird's-eye view of a landscape where an interconnected network of conservation lands has been gradually protected through the steady application of conservation zoning techniques and conservation subdivision design standards.

Figure 7: "Option 1"). Another full-density option could include a 25 percent density bonus for preserving 60 percent of the unconstrained land (Figure 8: "Option 2"). Municipalities might consider offering as much as a 100 percent density bonus for protecting 70 percent of that land (Figure 11: "Option 5").

3 Conservation Zoning A "Menu" of Choices

The main reason subdivisions typically consist of nothing more than houselots and streets is that most local land-use ordinances ask little, if anything, with respect to conserving open space or providing neighborhood amenities (see Figure 6).

Communities wishing to break the cycle of "wall-to-wall houselots" need to consider modifying their zoning to actively and legally encourage subdivisions that set aside at least 50 percent of the land as permanently protected open space and to incorporate substantial density disincentives for developers who do not conserve any significant percentage of land.

Following this approach, a municipality would first calculate a site's yield using traditional zoning. A developer would then be permitted full density *only* if at least 50 percent of the buildable land is maintained as undivided open

Figure 7: "Option 1"). Another full-density option could include a 25 percent density bonus for preserving 60 percent of the unconstrained land (Figure 8: "Option 2"). Municipalities might consider offering as much as a 100 percent density bonus for protecting 70 percent of that land (Figure 11: "Option 5").

It is noteworthy that the 36 village-like lots in Option 5 occupy less land than the 18 lots in Option 1, and that Option 5 therefore contributes more significantly to the goal of creating community-wide networks of open space. The village-scale lots in Option 5 are particularly popular with empty-nesters, single-parent households, and couples with young children. Its traditional layout is based on that of historic hamlets and villages in the region, and new development in this category could be controlled as Conditional

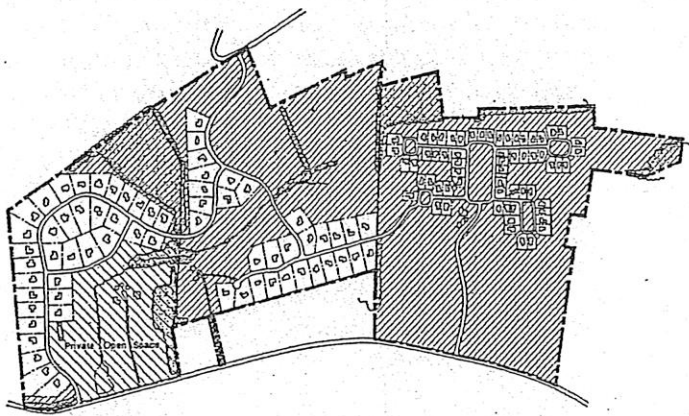


Figure 4
The conservation lands (shown in gray) were deliberately laid out to form part of an interconnected network of open space in these three adjoining subdivisions.

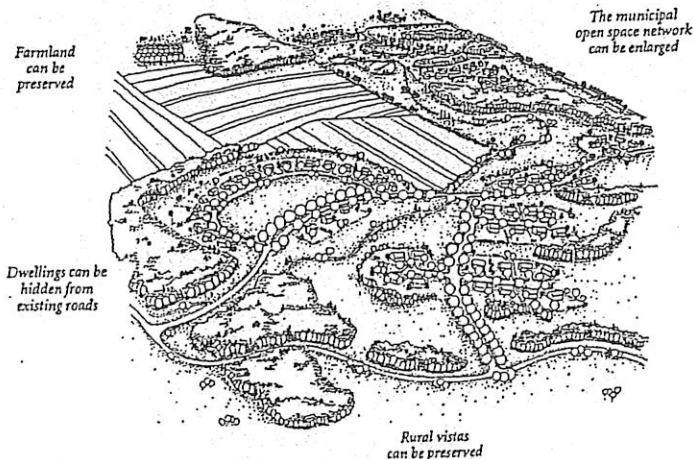
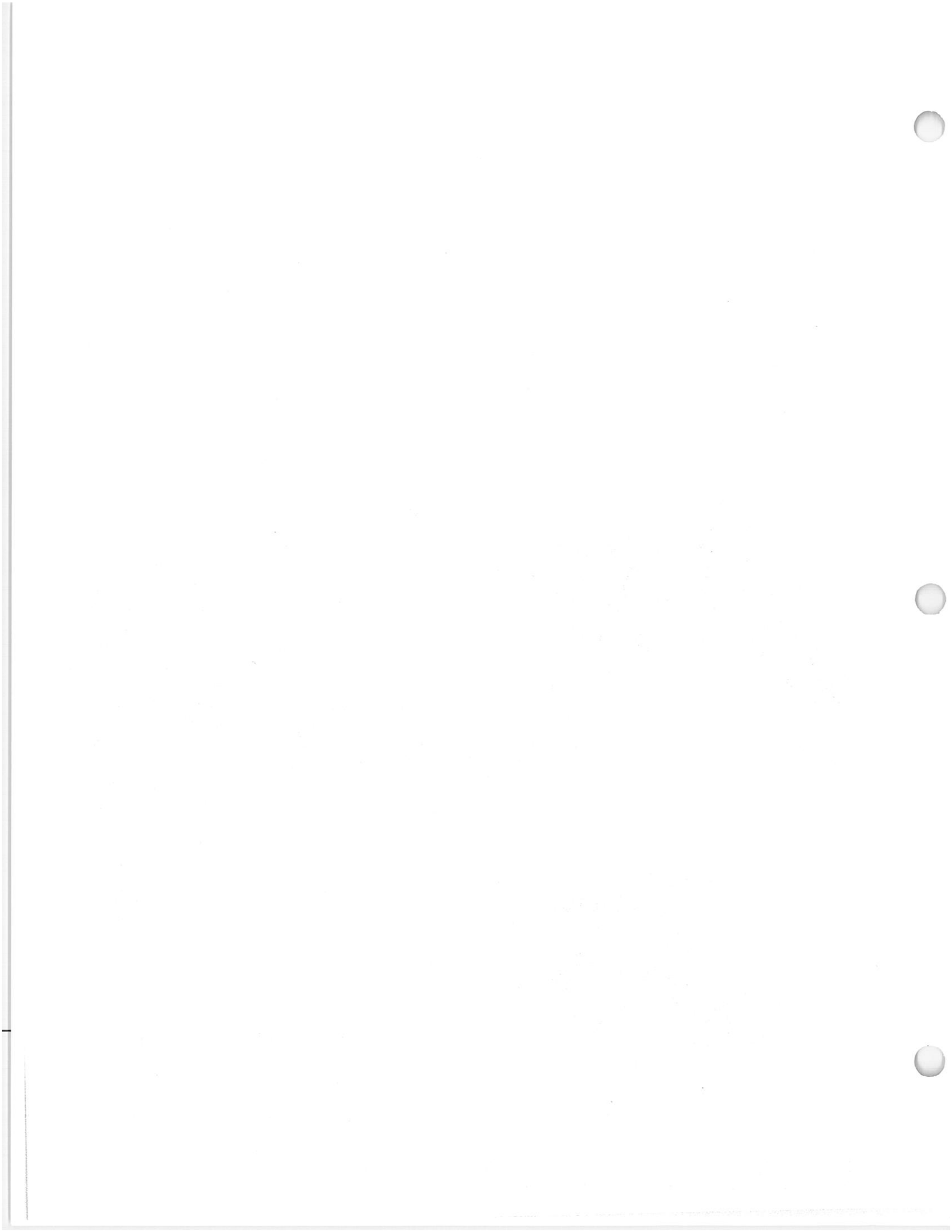


Figure 5
This sketch shows how you can apply the techniques described in this booklet to set aside open space which preserves rural character, expands community parkland and creates privacy for residences. (Source: Montgomery County Planning Commission)



Growing Greener

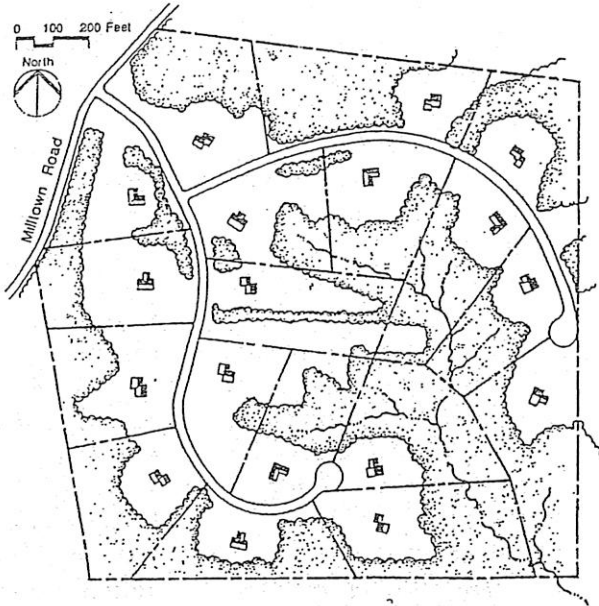


Figure 6 YIELD PLAN

The kind of subdivision most frequently created in Pennsylvania is the type which blankets the development parcel with houselots, and which pays little if any attention to designing around the special features of the property. In this example, the house placement avoids the primary conservation areas, but disregards the secondary conservation features. However, such a sketch can provide a useful estimate of a site's capacity to accommodate new houses at the base density allowed under zoning—and is therefore known as a "Yield Plan."

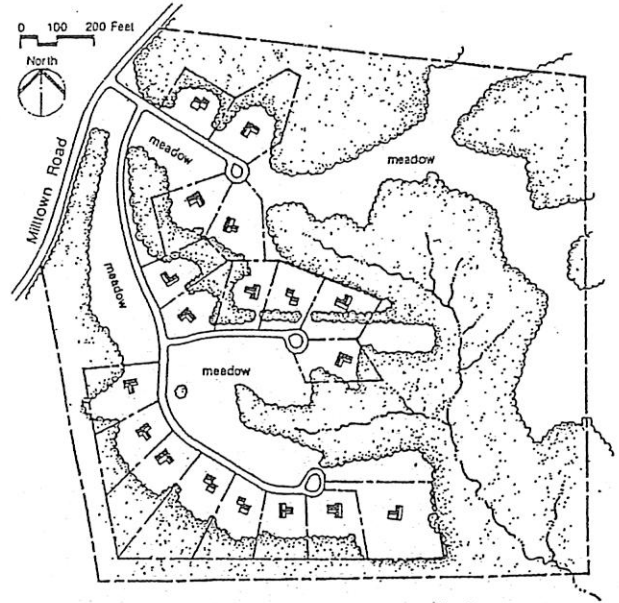


Figure 7 OPTION I

Density-neutral with Pre-existing Zoning
18 lots
Lot Size Range: 20,000 to 40,000 sq. ft.
50% undivided open space

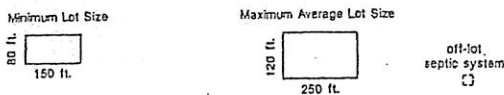
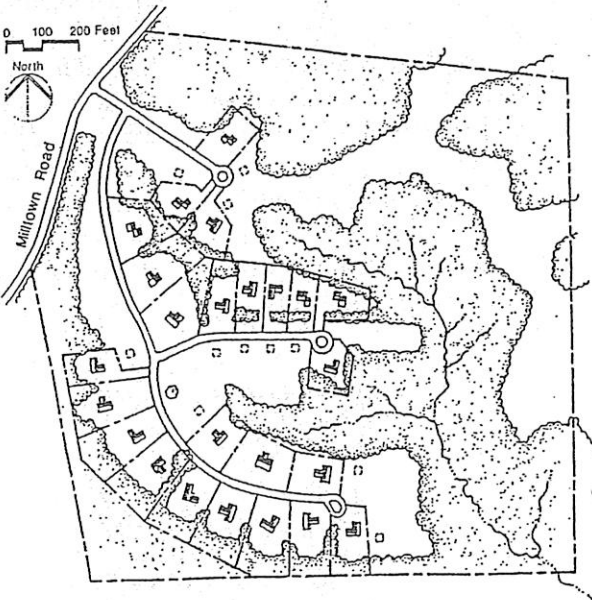


Figure 8 OPTION 2

Enhanced Conservation and Density
24 Lots
Lot Size Range: 12,000 to 24,000 sq. ft.

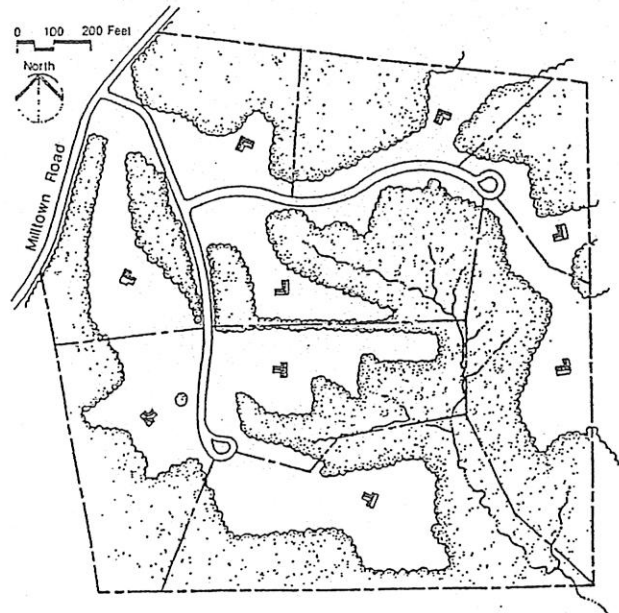
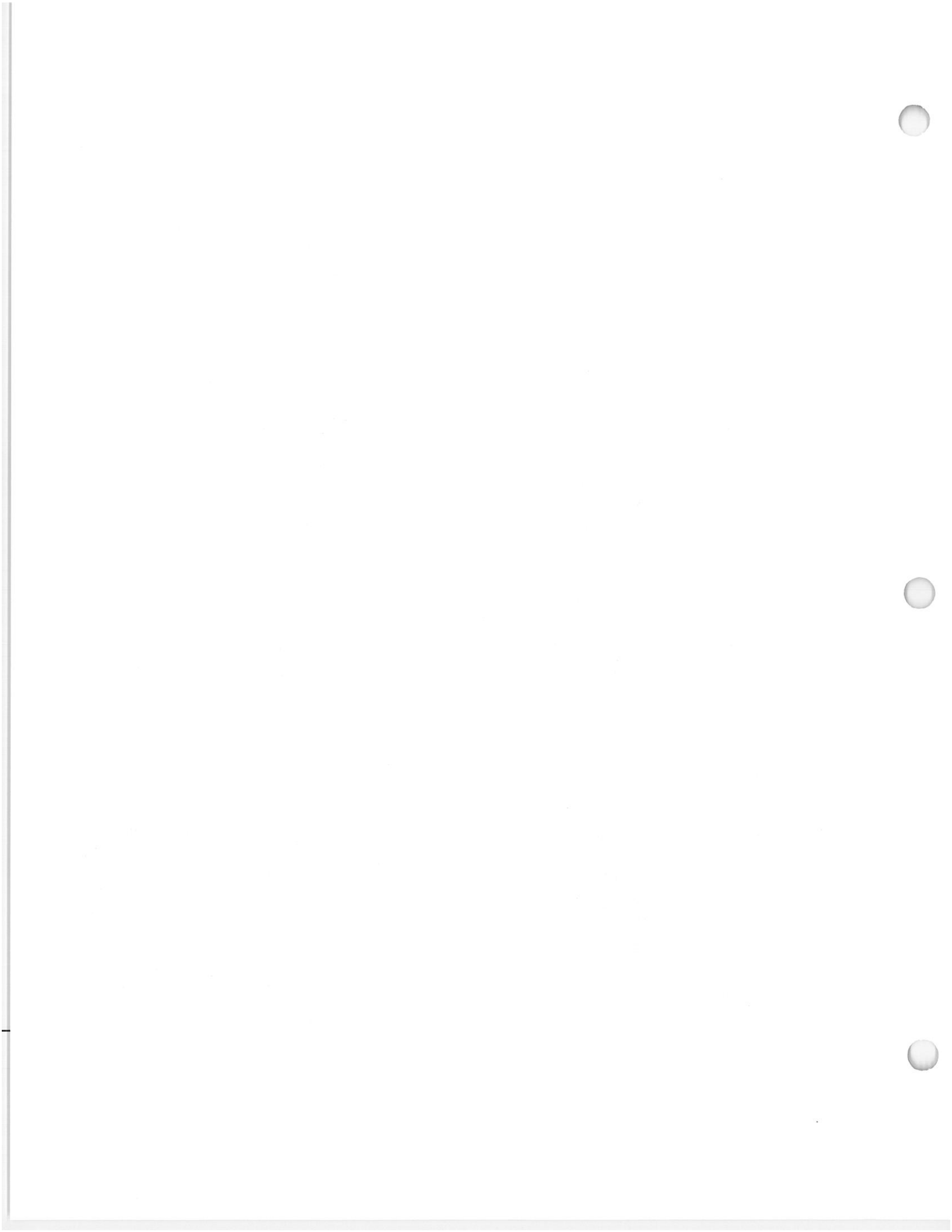


Figure 9 OPTION 3

50% Density Reduction
9 Lots
Typical Lot Size: 160,000 sq. ft. (4 acres)



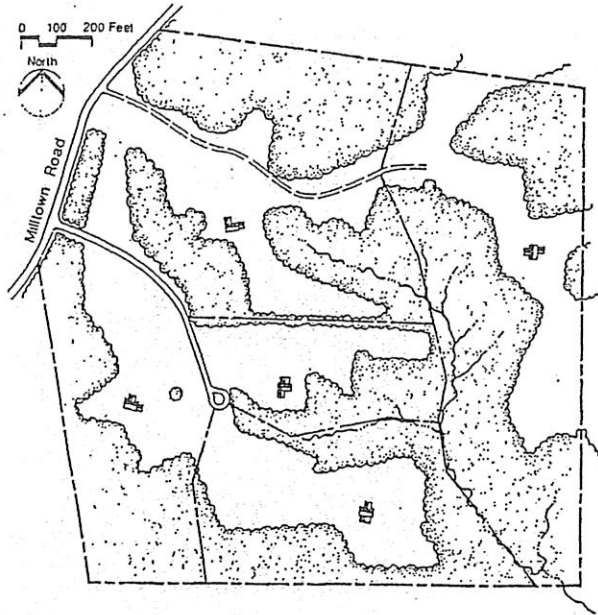


Figure 10 OPTION 4
Country Properties
5 Lots
Maximum Density: 10 acres per principal dwelling
70% density reduction

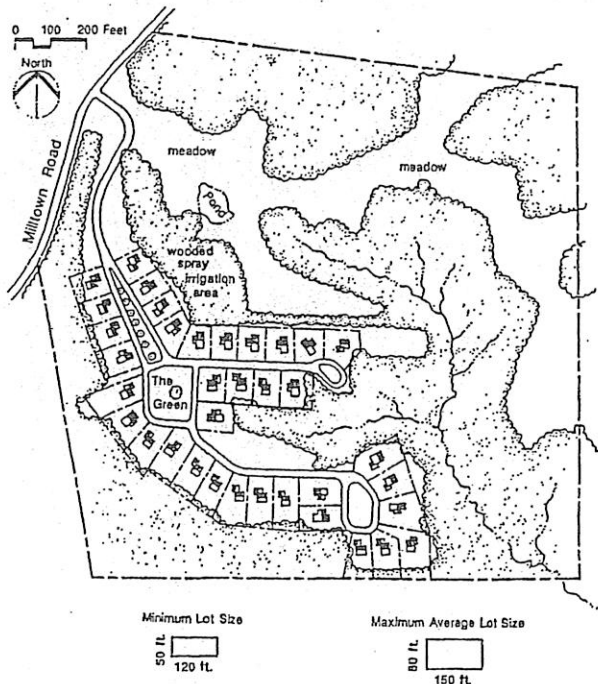


Figure 11 OPTION 5
Hamlet or Village
36 Lots
Lot Size Range: 6,000 to 12,000 sq. ft.
70% undivided open space

Uses subject to a set of extensively illustrated design standards.

Developers wishing to serve the "estate lot" market have two additional options. One involves lots containing at least four acres of unconstrained land (Figure 9: "Option 3"). The other is comprised of "country properties" of at least 10 acres, which may be accessed by gravel drives built to new township standards for very low-volume rural lanes (Figure 10: "Option 4"). An additional incentive to encourage developers to choose this fourth option would typically be permission to build up to two accessory dwellings on these properties. Those units would normally be limited in size, subject to architectural design standards to resemble traditional estate buildings, and restricted from further lot division.

Two or more of these options could be combined on a single large property. One logical approach

would combine Options 4 and 5, with the Option 4 "country properties" comprising part of the required greenbelt open space around an Option 5 village (see Figure 12).

Conspicuously absent from this menu of choice is the conventional full density subdivision providing no unfragmented open space (Figure 6). Because that kind of development causes the largest loss of resource land and poses the greatest obstacle to conservation efforts, it is not included as an option under this approach.

For illustrative purposes, this booklet uses a one dwelling unit per two density. However, conservation zoning is equally applicable to higher density zoning districts of three or four units per acre. Such densities typically occur in villages, boroughs, urban growth boundary areas and TDR receiving areas where open space setbacks are critical to the residents' quality of life.

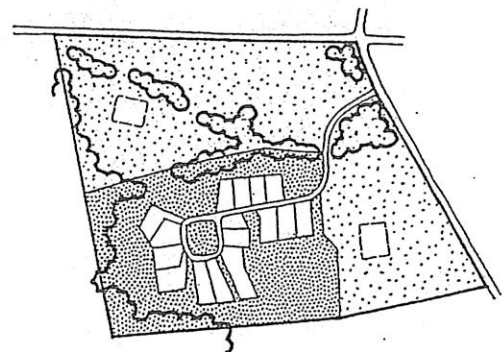
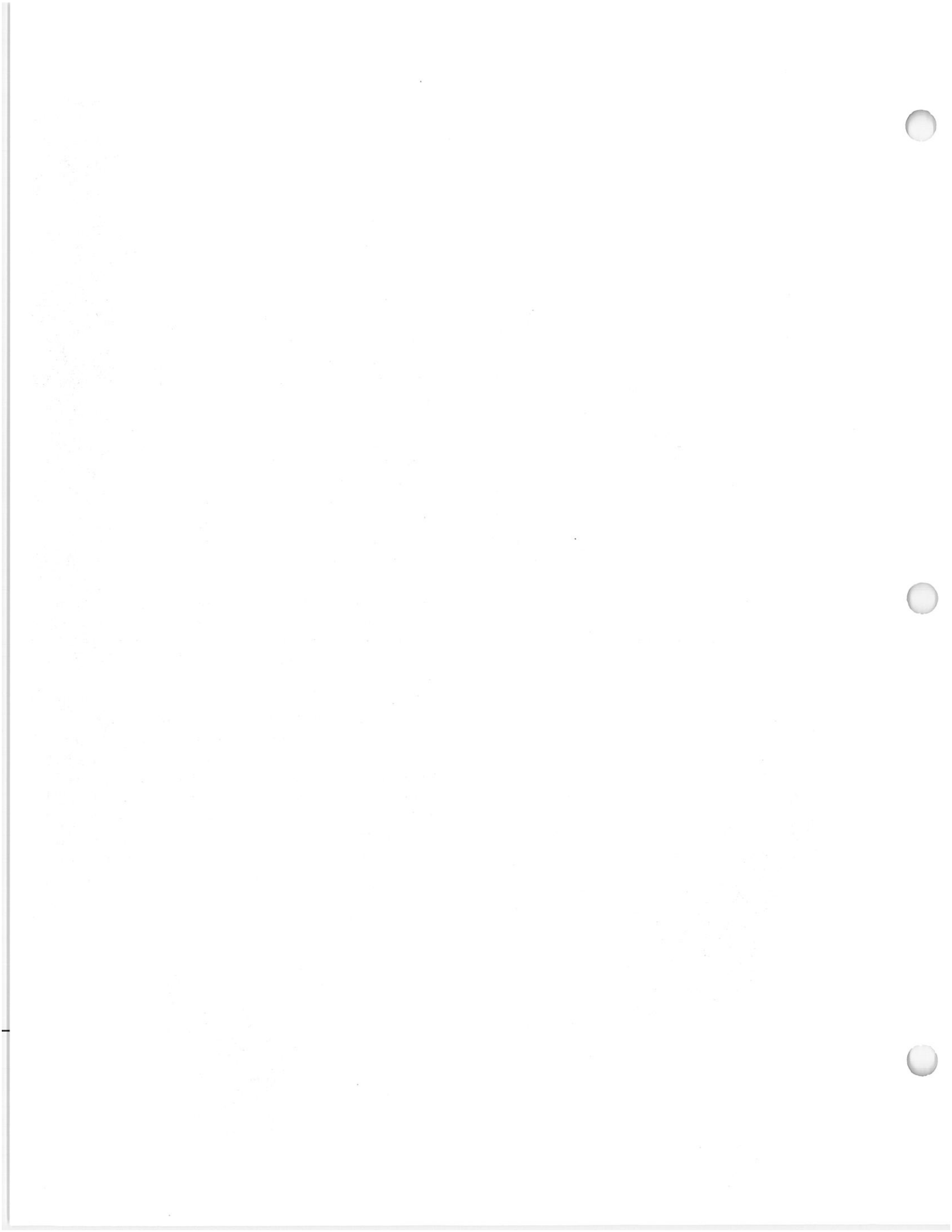


Figure 12
An Option 5 village surrounded by its own open space and buffered from the township road by two "country properties" (Option 4).



4 Conservation Subdivision Design

A Four-Step Process

Designing subdivisions around the central organizing principle of land conservation is not difficult. However, it is essential that ordinances contain clear standards to guide the conservation design process. The four-step approach described below has been proven to be effective in laying out new full-density developments where all the significant natural and cultural features have been preserved.

Step One consists of identifying the land that should be permanently protected. The developer incorporates areas pre-identified on the community-wide *Map of Potential Conservation Lands* and then performs a detailed site analysis in order to precisely locate features to be conserved. The developer first identifies all the constrained lands (wet, floodprone, and steep), called *Primary Conservation Areas* (Figure 13). He then identifies *Secondary Conservation Areas* (Figure 14) which comprise noteworthy features of the property that are typically unprotected under current codes: mature woodlands, greenways and trails, river and stream corridors, prime farmland, hedgerows and

individual free-standing trees or tree groups, wildlife habitats and travel corridors, historic sites and structures, scenic viewsheds, etc. After "greenlining" these conservation elements, the remaining part of the property becomes the *Potential Development Area* (Figure 15).

Step Two involves locating sites of individual houses within the Potential Development Area so that their views of the open space are maximized (Figure 16). The number of houses is a function of the density permitted within the zoning district, as shown on a *Yield Plan* (Figure 6). (In unsewered areas officials should require a 10 percent sample of the most questionable lots—which they would select—to be tested for septic suitability. Any lots that fail would be deducted and the applicant would have to perform a second 10 percent sample, etc.)

Step Three simply involves "connecting the dots" with streets and informal trails (Figure 17), while **Step Four** consists of drawing in the lot lines (Figure 18).

This approach reverses the sequence of steps in laying out conventional

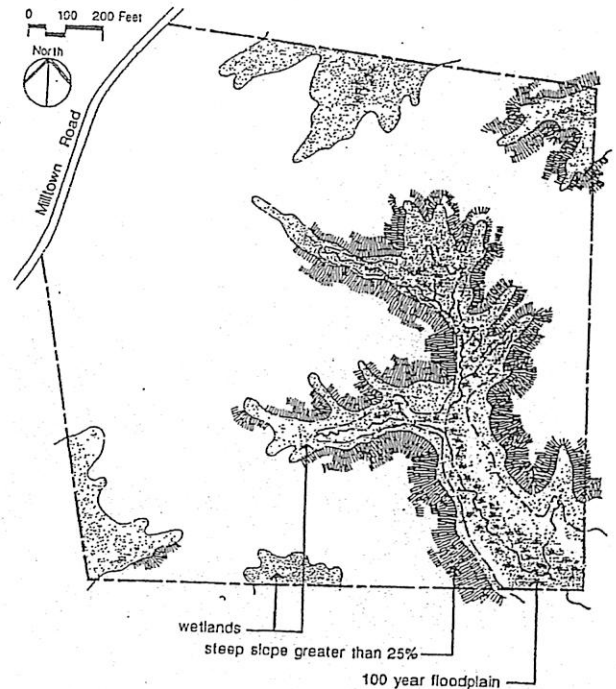


Figure 13 STEP ONE, Part One
Identifying Primary Conservation Areas

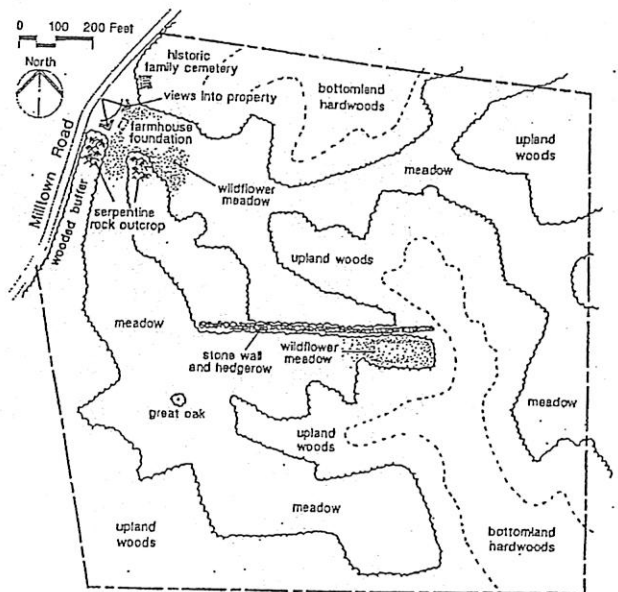
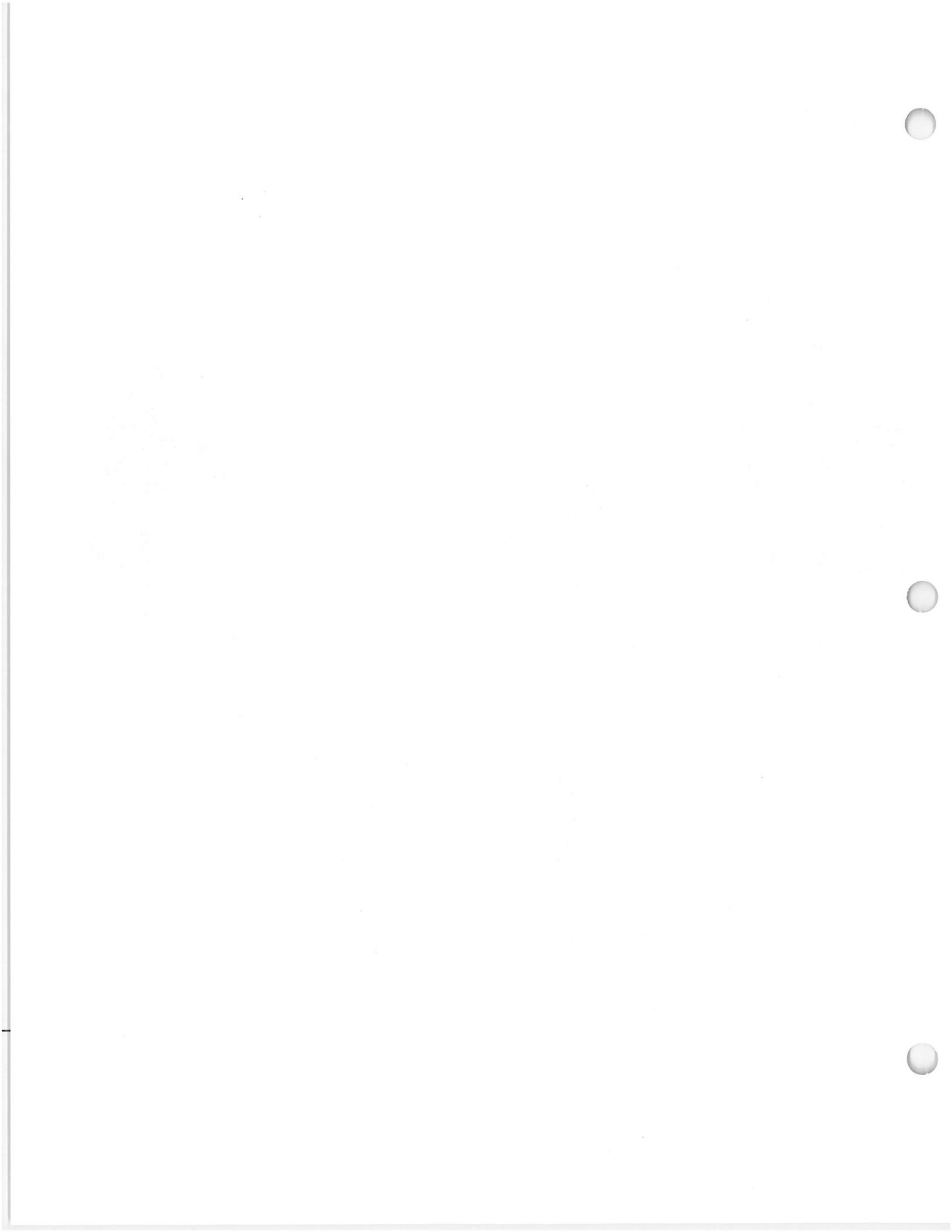


Figure 14 STEP ONE, Part Two
Identifying Secondary Conservation Areas

Typically unprotected under local codes, these special features constitute a significant asset to the property value and neighborhood character. Secondary conservation areas are the most vulnerable to change, but can easily be retained by following this simple four-step process.



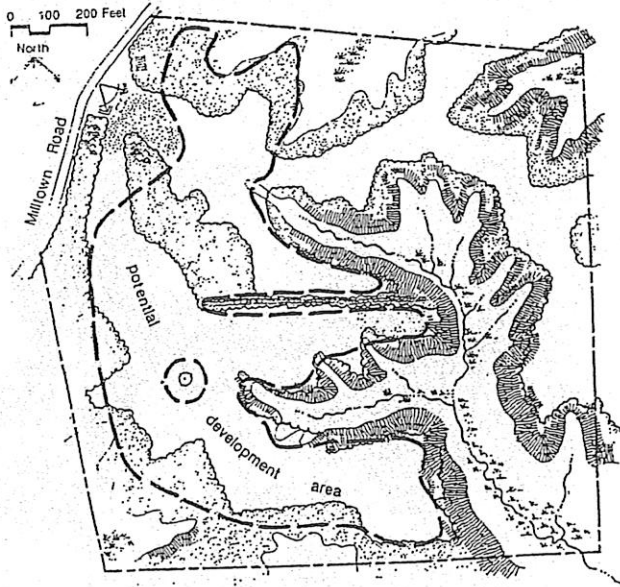


Figure 15 STEP ONE, Part Three
Potential Development Areas
for Options 1, 2, and 5

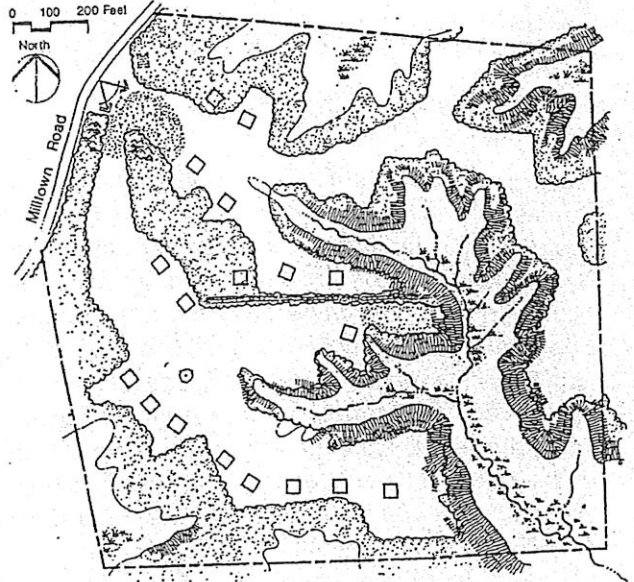


Figure 16 STEP TWO
Locating House Sites

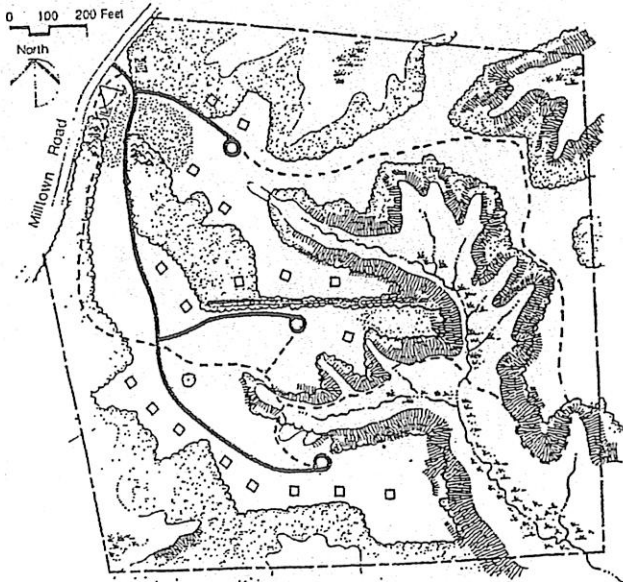


Figure 17 STEP THREE
Aligning Streets and Trails

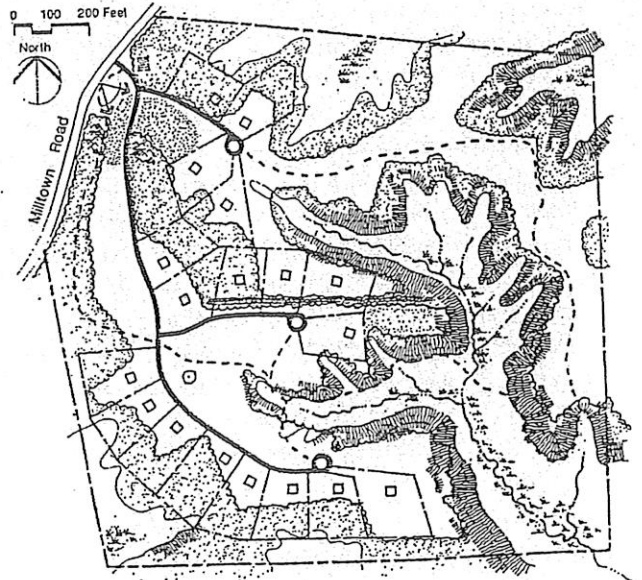
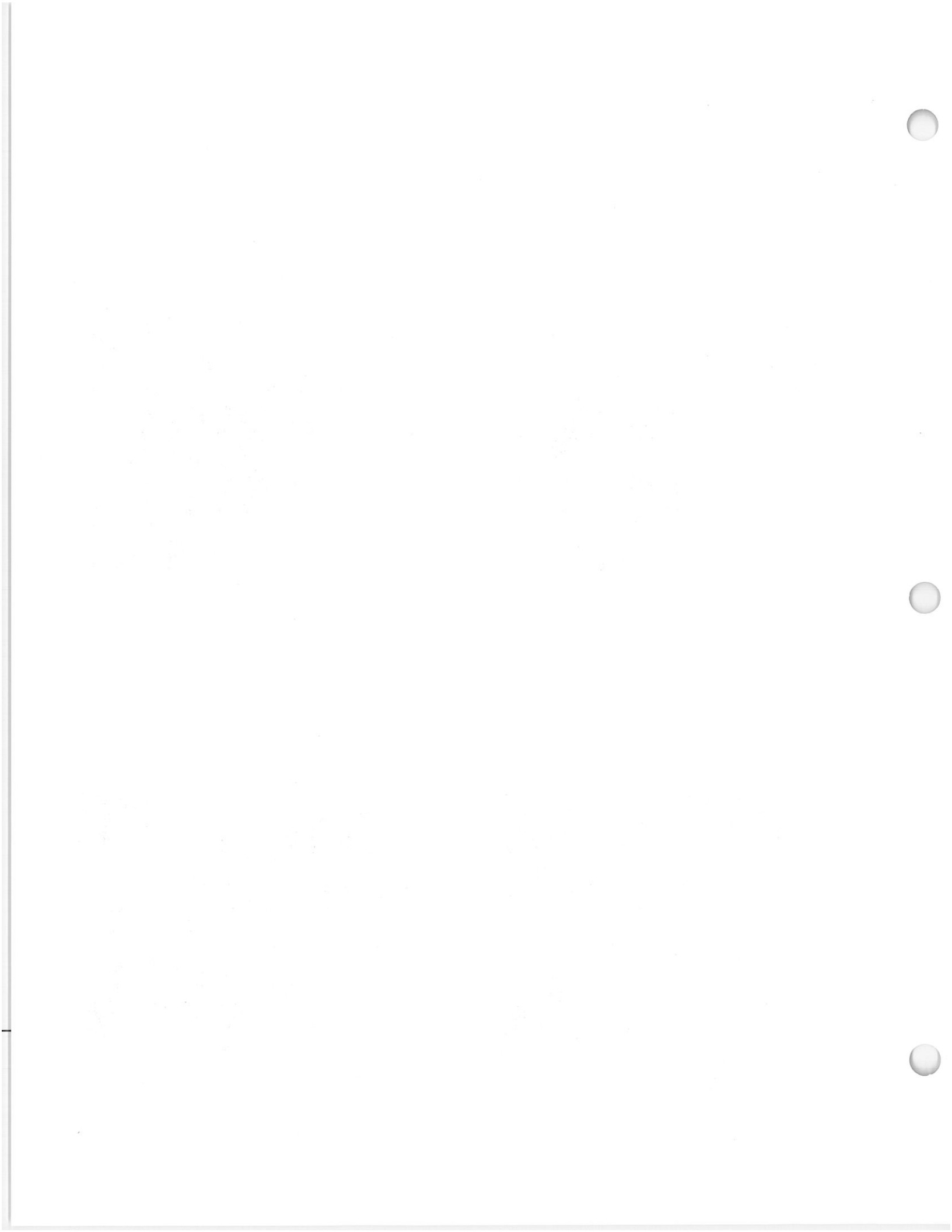


Figure 18 STEP FOUR
Drawing in the Lot Lines



street system is the first thing to be identified, followed by lot lines fanning out to encompass every square foot of ground into houselots. When municipalities require nothing more than "houselots and streets," that is all they receive. But by setting community standards higher and requiring 50 to 70 percent

open space as a precondition for achieving full density, officials can effectively encourage conservation subdivision design. The protected land in each new subdivision would then become building blocks that add new acreage to community-wide networks of interconnected open space each time a property is developed.

landowner or developer wants it to be. In the vast majority of situations, municipalities themselves have no desire to own and manage such conservation land, which they generally feel should be a neighborhood responsibility. In cases where local officials wish to provide township recreational facilities (such as ballfields or trails) within conservation subdivisions, the municipality must negotiate with the developer for the purchase of that land on a "willing seller/willing buyer" basis. To facilitate such negotiations, conservation zoning ordinances can be written to include density incentives to encourage developers to designate specific parts of their conservation land for public ownership or for public access and use.

A legal analysis of the *Growing Greener* workbook, by Harrisburg land use attorney Charles E. Zaleski, Esq., is reprinted on the last page of this booklet.

How can a community ensure permanent protection for conservation lands?

The most effective way to ensure that conservation land in a new subdivision will remain undeveloped forever is to place a permanent conservation ease-

ment on it. Such easements run with the chain of title, in perpetuity, and specify the various conservation uses that may occur on the property. These restrictions are separate from zoning ordinances and continue in force even if legal densities rise in future years. Easements are typically held by land trusts and units of government. Since political leadership can change over time, land trusts are the most reliable holder of easements, as their mission never varies. Deed restrictions and covenants are, by comparison, not as effective as easements, and are not recommended for this purpose. Easements can be modified only within the spirit of the original agreement, and only if the co-holders agree. In practice, while a proposal to erect another house or a country club building on the open space would typically be denied, permission to create a small ballfield or a single tennis court in a corner of a large conservation meadow or former field might well be granted.

What are the ownership, maintenance, tax and liability issues?

Among the most commonly expressed concerns about subdivisions which conserve open space are questions about who will

Frequently Asked Questions About Conservation Subdivision Design

Does this conservation-based approach involve a "taking"?

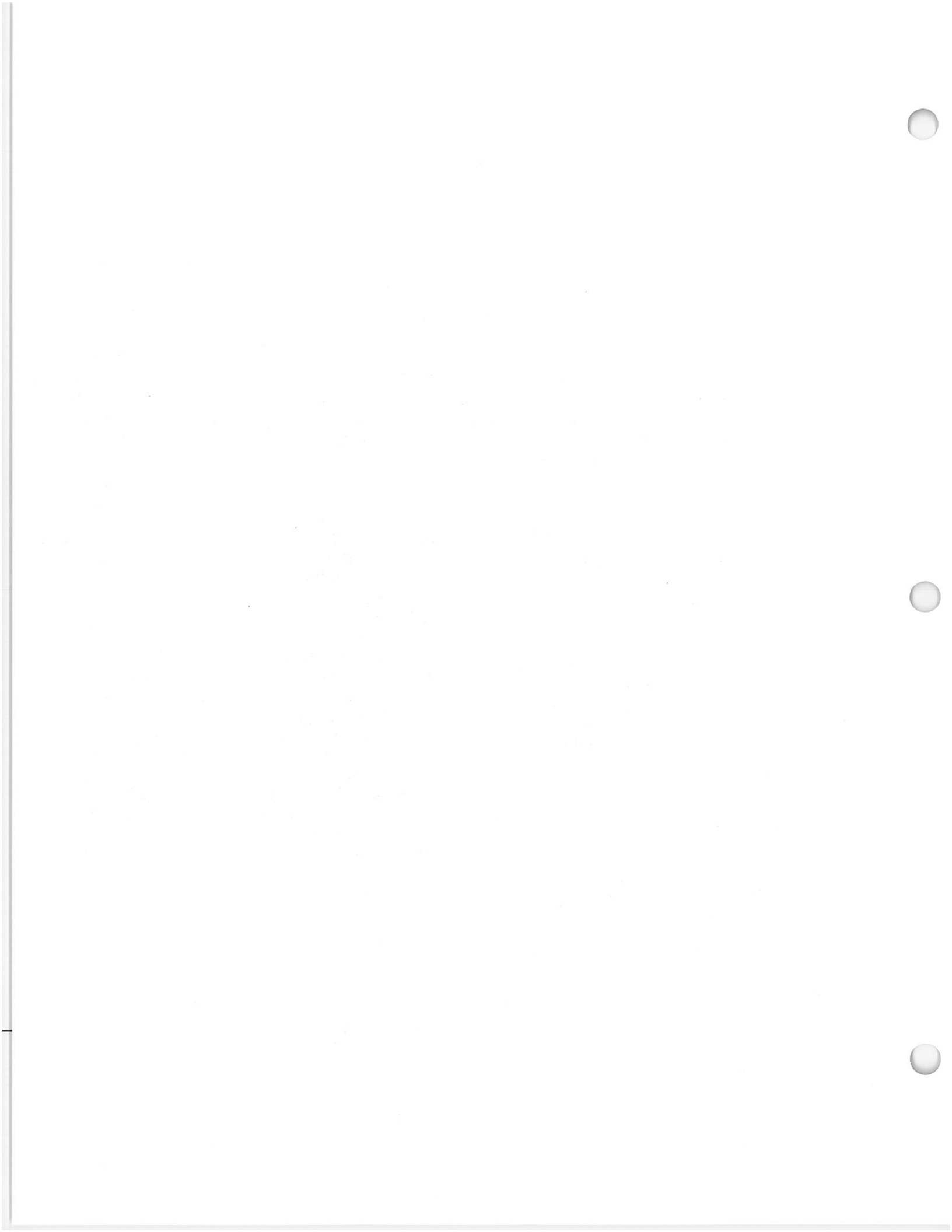
No. People who do not fully understand this conservation-based approach to subdivision design may mistakenly believe that it constitutes "a taking of land without compensation." This misunderstanding may stem from the fact that conservation subdivisions, as described in this booklet, involve either large percentages of undivided open space or lower overall building densities.

There are two reasons why this approach does not constitute a "taking."

First, no density is taken away. Conservation zoning is fundamentally fair

ers and developers to achieve full density under the municipality's current zoning—and even to increase that density significantly—through several different "as-of-right" options. Of the five options permitted under conservation zoning, three provide for either full or enhanced densities. The other two options offer the developer the choice to lower densities and increase lot sizes. Although conservation zoning precludes full-density layouts that do not conserve open space, this is legal because there is no constitutional "right to sprawl."

Second, no land is taken for public use. None of the land which is required to be designated for conservation purposes becomes public (or even publicly



own and maintain the conservation land, and who will be responsible for the potential liability and payment of property taxes. The short answer is that whoever owns the conservation land is responsible for all of the above. But who owns this land?

Ownership Choices.

There are basically four options, which may be combined within the same subdivision where that makes the most sense.

• Individual Landowner

At its simplest level, the original landowner (a farmer, for example) can retain ownership to as much as 80 percent of the conservation land to keep it in the family. (At least 20 percent of the open space should be reserved for common neighborhood use by subdivision residents.) That landowner can also pass this property on to sons or daughters, or sell it to other individual landowners, with permanent conservation easements running with the land and protecting it from development under future owners. The open space should not, however, be divided among all of the individual subdivision lots as land management and access difficulties are likely to arise.

• Homeowners' Associations

Most conservation land within subdivisions is

(HOAs). A few basic ground rules encourage a good performance record. First, membership must be automatic, a precondition of property purchase in the development. Second, zoning should require that bylaws give such associations the legal right to place liens on properties of members who fail to pay their dues. Third, facilities should be minimal (ball fields and trails rather than clubhouses and swimming pools) to keep annual dues low. And fourth, detailed maintenance plans for conservation areas should be required by the municipality as a condition of approval. The municipality has enforcement rights and may place a lien on the property should the HOA fail to perform their obligations to maintain the conservation land.

• Land Trusts

Although homeowners' associations are generally the most logical recipients of conservation land within subdivisions, occasionally situations arise where such ownership most appropriately resides with a land trust (such as when a particularly rare or significant natural area is involved). Land trusts are private, charitable groups whose principal purpose is to protect land under its stewardship from inappropriate change. Their most common role is to hold easements or fee simple

within new developments and elsewhere in the community, to ensure that all restrictions are observed. To cover their costs in maintaining land they own or in monitoring land they hold easements on, land trusts typically require some endowment funding. When conservation zoning offers a density bonus, developers can donate the proceeds from the additional "endowment lots" to such trusts for maintenance or monitoring.

• Municipality or Other Public Agency

In special situations a local government might desire to own part of the conservation land within a new subdivision, such as when that land has been identified in a municipal open space plan as a good location for a neighborhood park or for a link in a community trail network. Developers can be encouraged to sell or donate certain acreage to municipalities through additional density incentives, although the final decision would remain the developer's.

• Combinations of the Above

As illustrated in Figure 19, the conservation land within new subdivisions could involve multiple ownerships, including (1) "non-common" open space such as cropland retained by the original farmer, (2) common open space such as ballfields owned by an

corridor owned by either a land trust or by the municipality.

Maintenance Issues.

Local officials should require conservation area management plans to be submitted and approved prior to granting final subdivision approval. In Lower Merion Township, Montgomery County, the community's "model" management plan is typically adopted by reference by each subdivision applicant. That document identifies a dozen different kinds of conservation areas (from woodlands and pastures to ballfields and abandoned farmland that is reforesting) and describes recommended management practices for each one. Farmland is typically leased by HOAs and land trusts to local farmers, who often agree to modify some of their agricultural practices

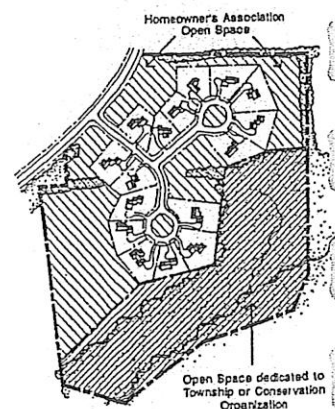
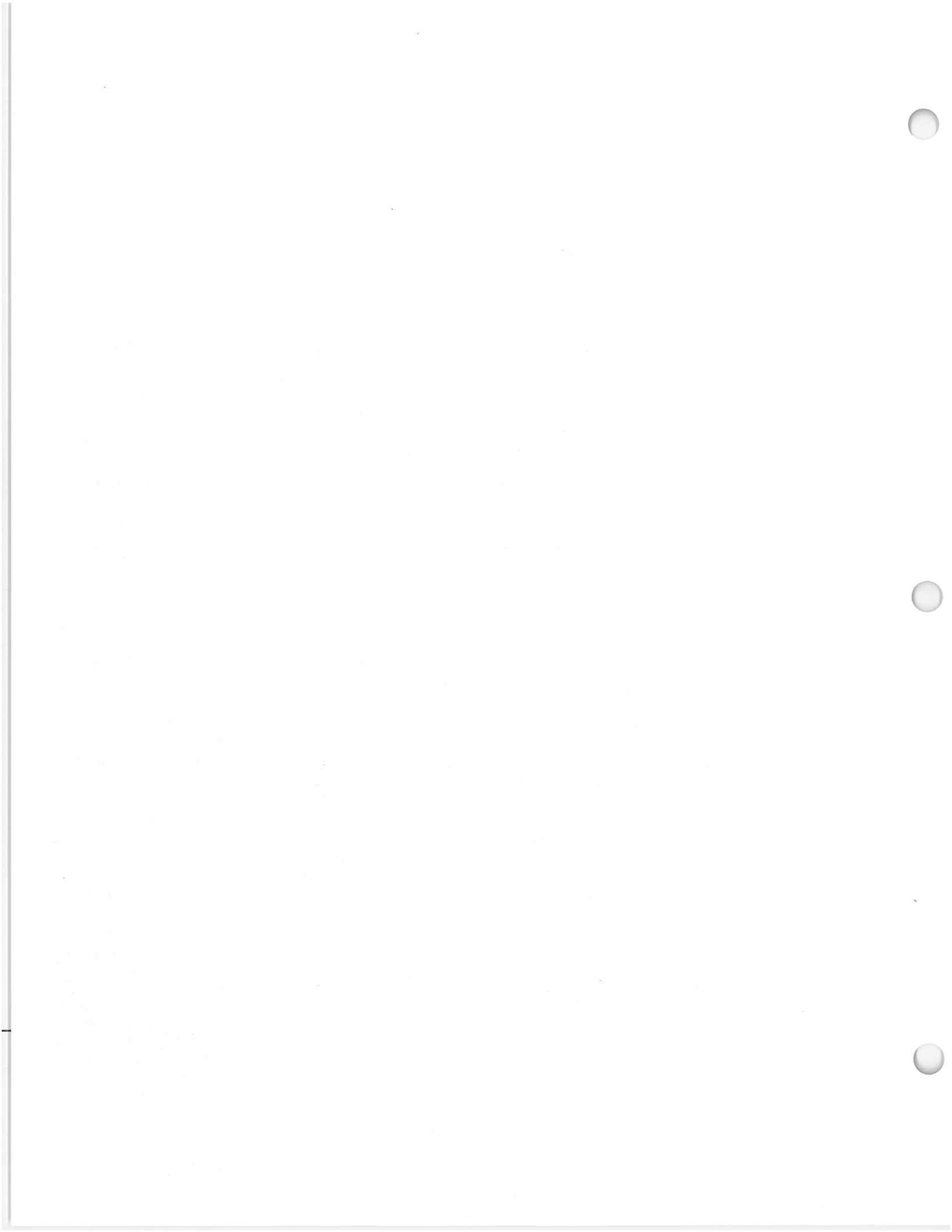


Figure 19
Various private and public entities can own different parts of the open space within conservation subdivisions, as illustrated above.



to minimize impacts on nearby residents. Although ballfields and village greens require weekly mowing, conservation meadows typically need only annual mowing. Woodlands generally require the least maintenance: trimming bushes along walking trails, and removing invasive vines around the outer edges where greater sunlight penetration favors their growth.

Tax Concerns. Property tax assessments on conservation subdivisions should not differ, in total, from those on conventional developments. This is because the same number of houses and acres of land are involved in both cases (except when part of the open space is owned by a public entity, which is uncommon). Although the open space in conservation subdivisions is taxed low because easements prevent it from being developed, the rate is similar to that applied to land in conventional subdivisions where the larger houselots are not big enough to be further subdivided. (For example, the undeveloped back half of a one-acre lot in a one-acre zoning district is subject to minimal taxation because it has no further development value.)

Liability Questions. The Pennsylvania Recreation Use of Land and Water Act protects owners of undevel-

oped land from liability for negligence if the landowner does not charge a fee to recreational users. A tree root or rock outcropping along a trail that trips a hiker will not constitute landowner negligence. To be sued successfully in Pennsylvania, landowners must be found to have "willfully or maliciously failed to guard against a dangerous condition." This is a much more difficult case for plaintiffs to make. Even so, to cover themselves against such situations, owners of conservation lands routinely purchase liability insurance policies similar to those that most homeowners maintain.

How can on-site sewage disposal work with conservation subdivisions?

The conventional view is that the smaller lots in conservation subdivisions make them more difficult to develop in areas without sewers. However, the reverse is true. The flexibility inherent in the design of conservation subdivisions makes them superior to conventional layouts in their ability to provide for adequate sewage disposal. Here are two examples:

Utilizing the best soils. Conservation design requires the most suitable soils on the property to be identified at the outset, enabling houselots to be arranged to take the best advantage of them. If one end of a property has deeper, better drained soils, it makes more sense to site the homes in that part of the property rather than to spread them out, with some lots located entirely on mediocre soils that barely manage to meet minimal standards for septic approval.

Locating individual systems within the open space. Conventional wisdom also holds that when lots become smaller, central water or sewage disposal is required. That view overlooks the practical alternative of locating individual wells and/or individual septic systems within the permanent open space adjacent to the more compact lots typical of conservation subdivisions, as shown in Figure 20. There is no engineering reason to require that septic filter beds must be located within each houselot. However, it is essential that the final approved subdivision plan clearly indicate which parts of the undivided open space are designated for septic disposal, with each lot's disposal area graphically indicated through dotted lines extending out

into the conservation land. These filter beds can be located under playing fields, or conservation meadows in the same way they typically occupy positions under suburban lawns. (If mound systems are required due to marginal soil conditions, they are best located in passive use areas such as conservation meadows where the grass is cut only once a year. Such mounds should also be required to be contoured with gently sloping sides to blend into the surrounding landscape wherever possible.)

Although maintenance and repair of these septic systems remains the responsibility of individual lot owners, it is recommended that HOAs be authorized to pump individual septic tanks on a

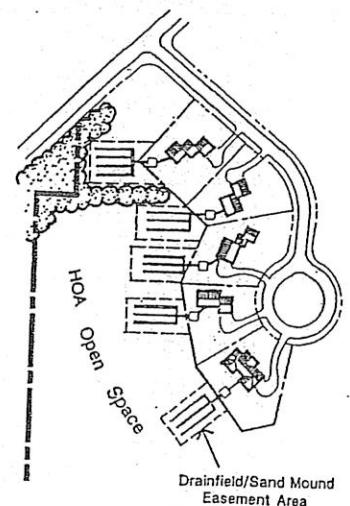
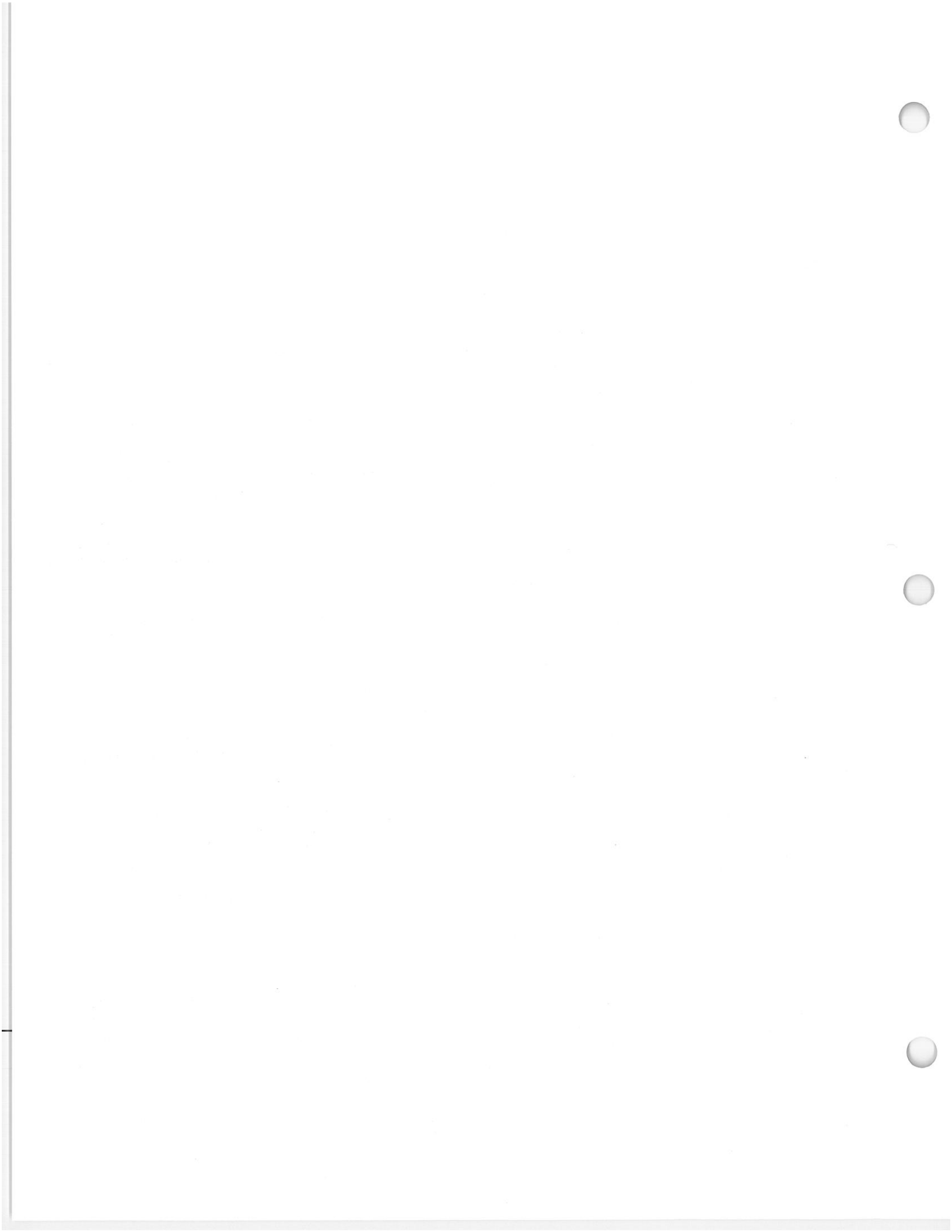


Figure 20
A practical alternative to central water or sewage disposal facilities are individually-owned wells and/or septic systems located within conservation areas, in places specifically designated for them on the final plan.



regular basis (every three or four years) to ensure that the accumulated sludge never rises to a level where it can flow into and clog the filter beds. This inexpensive, preventive maintenance greatly extends the life of filter beds.

How does this conservation approach differ from "clustering"?

The *Growing Greener* conservation approach described here differs dramatically from the kind of "clustering" that has occurred in many communities over the past several decades. The principal points of difference are as follows:

Higher Percentage and Quality of Open Space.

In contrast with typical cluster codes, conservation zoning establishes higher standards for both the quantity and quality of open space that is to be preserved. Under conservation zoning, 50 to 70 percent of the unconstrained land is permanently set aside. This compares with cluster provisions that frequently require only 25 to 30 of the gross land area be conserved. That minimal open space often includes all of the most unusable land as open space, and sometimes also includes undesirable,

stormwater management facilities and land under high-tension power lines.

Open Space Pre-Determined to Form Community-wide Conservation Network.

Although clustering has at best typically produced a few small "green islands" here and there in any municipality, conservation zoning can protect blocks and corridors of permanent open space. These areas can be pre-identified on a comprehensive plan *Map of Potential Conservation Lands* so that each new development will add to—rather than subtract from—the community's open space acreage.

Eliminates the Standard Practice of Full-Density with No Open Space.

Under this new system, full density is achievable for layouts in which 50 percent or more of the unconstrained land is conserved as permanent, undivided open space. By contrast, cluster zoning provisions are typically only optional alternatives within ordinances that permit full density, by right, for standard "cookie-cutter" designs with no open space.

Simply put, the differences between clustering and conservation zoning are like the differences between a Model T and a Taurus.

How do residential values in conservation subdivisions compare to conventional subdivisions?

Another concern of many people is that homes in conservation subdivisions will differ in value from those in the rest of the community. Some believe that because so much land is set aside as open space, the homes in a conservation subdivision will be prohibitively priced and the municipality will become a series of elitist enclaves. Other people

take the opposite view, fearing that these homes will be smaller and less expensive than their own because of the more compact lot sizes offered in conservation subdivisions.

Both concerns are understandable but they miss the mark. Developers will build what the market is seeking at any given time, and they often base their decision about selling price on the character of surrounding neighborhood and the amount they must pay for the land.

In conservation subdivisions with substantial open space, there is little or no correlation between lot size and price. These developments have sometimes been described as "golf

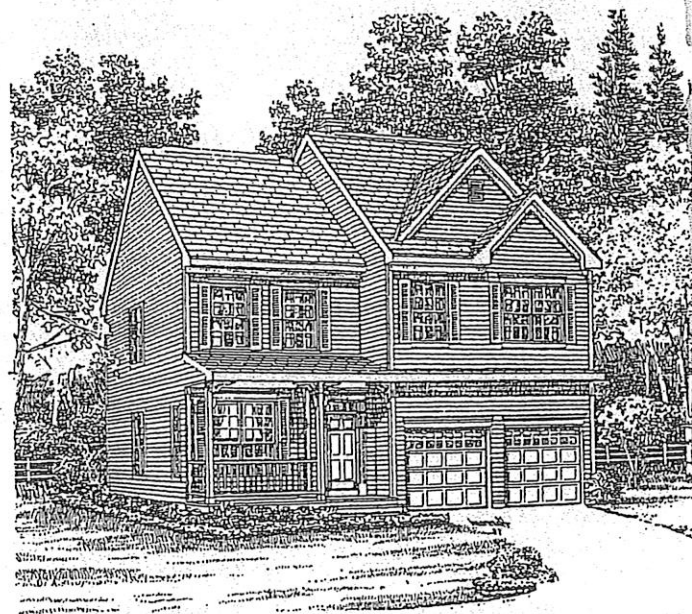
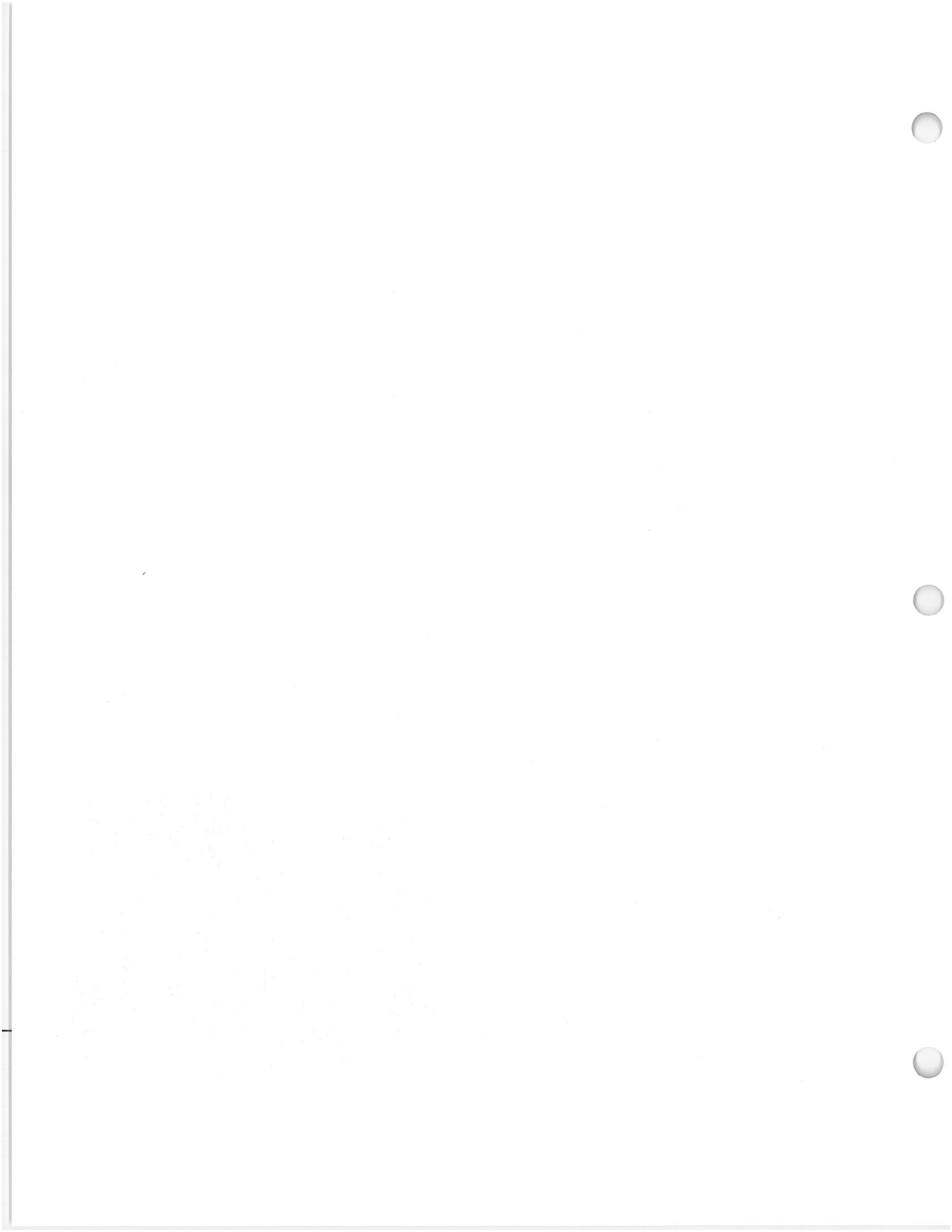


Figure 21
This house design fits comfortably on lots 45 to 50 feet wide, demonstrating that homes with 2,400 sq. ft. of floorspace and a two-car garage can be built within the village-scale lots featured in the "Option 5" zoning alternative.



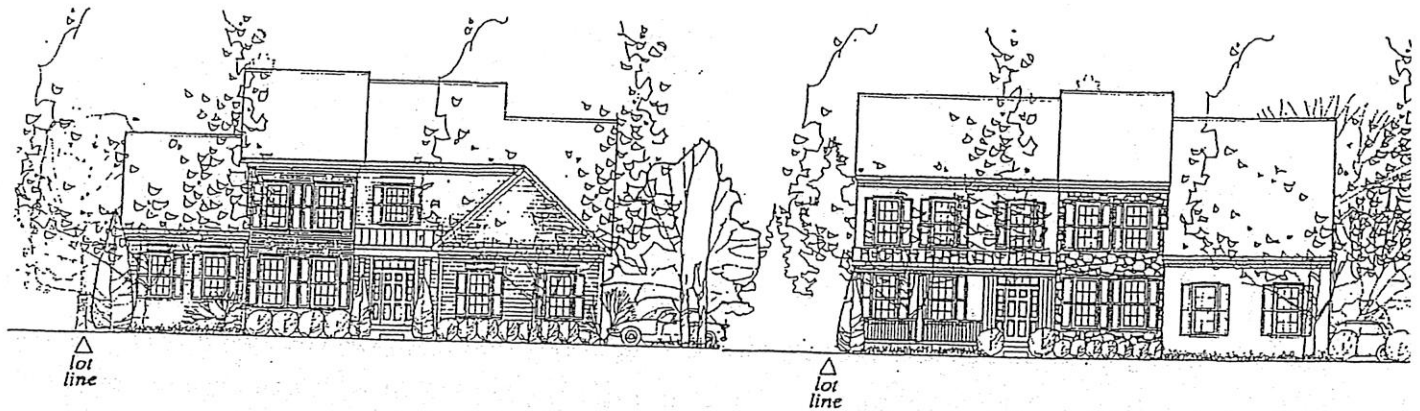


Figure 22
 Developers who wish to build larger homes will find this example interesting. Although it contains nearly 3,000 sq. ft. and features an attractive side-loaded garage, it fits onto lots just 100 feet wide. This has been achieved by positioning the homes off-center, with 30 feet of side yard for the driveway and five feet of yard on the opposite side. This ensures 35 feet spacing between homes. (Courtesy of Realen Homes, Ambler)

course communities without the golf course," underscoring the idea that a house on a small lot with a great view is frequently worth as much or more than the same house on a larger lot which is boxed in on all sides by other houses.

It is a well-established fact of real estate that people pay more for park-like settings, which offset their tendency to pay less for smaller lots. Successful developers know how to

market homes in conservation subdivisions by emphasizing the open space. Rather than describing a house on a half-acre lot as such, the product is described as a house with 20 and one-half acres, the larger figure reflecting the area of conservation land that has been protected in the development. When that conservation area abuts other similar land, as in the township-wide open space network, a further marketing advantage exists.

involving density shifts among contiguous parcels. Other techniques can be effective, but their potential for influencing the "big picture" is limited. The *Growing Greener* approach offers the greatest potential because it:

- does not require public expenditure,
- does not depend upon landowner charity,
- does not involve complicated regulations for shifting rights to other parcels, and
- does not depend upon the cooperation of two or more adjoining landowners to make it work.

Of course, municipalities should continue their efforts to preserve special properties in their entirety whenever possible, such as by working with landowners interested in donating easements or fee title to a local conservation group, purchasing development

rights or fee title with county, state or federal grant money, and transferring development rights to certain "receiving areas" with increased density. However, until such time as more public money becomes available to help with such purchases, and until the Transfer of Development Rights mechanism becomes more operational at the municipal level, most parcels of land in any given community will probably eventually be developed. In that situation, coupling the conservation subdivision design approach with multi-optioned conservation zoning offers communities the most practical, doable way of protecting large acreages of land in a methodical and coordinated manner.

Relationship of the Growing Greener Approach to Other Planning Techniques

Successful communities employ a wide array of conservation planning techniques simultaneously, over an extended period of time. Complementary tools which a community should consider adding to its

"toolbox" of techniques include the purchase of development rights; donations of sales to conservancies; the transfer of development rights; and "landowner compacts"



Appendix

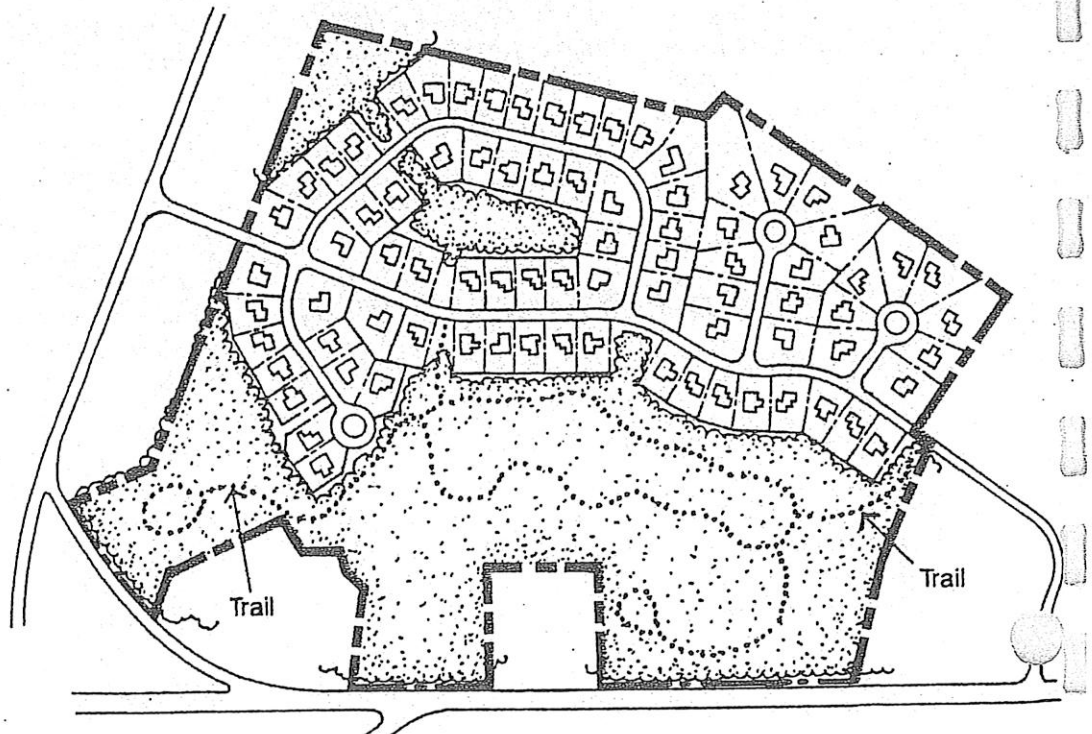
Selected Examples of Conservation Subdivisions in Pennsylvania

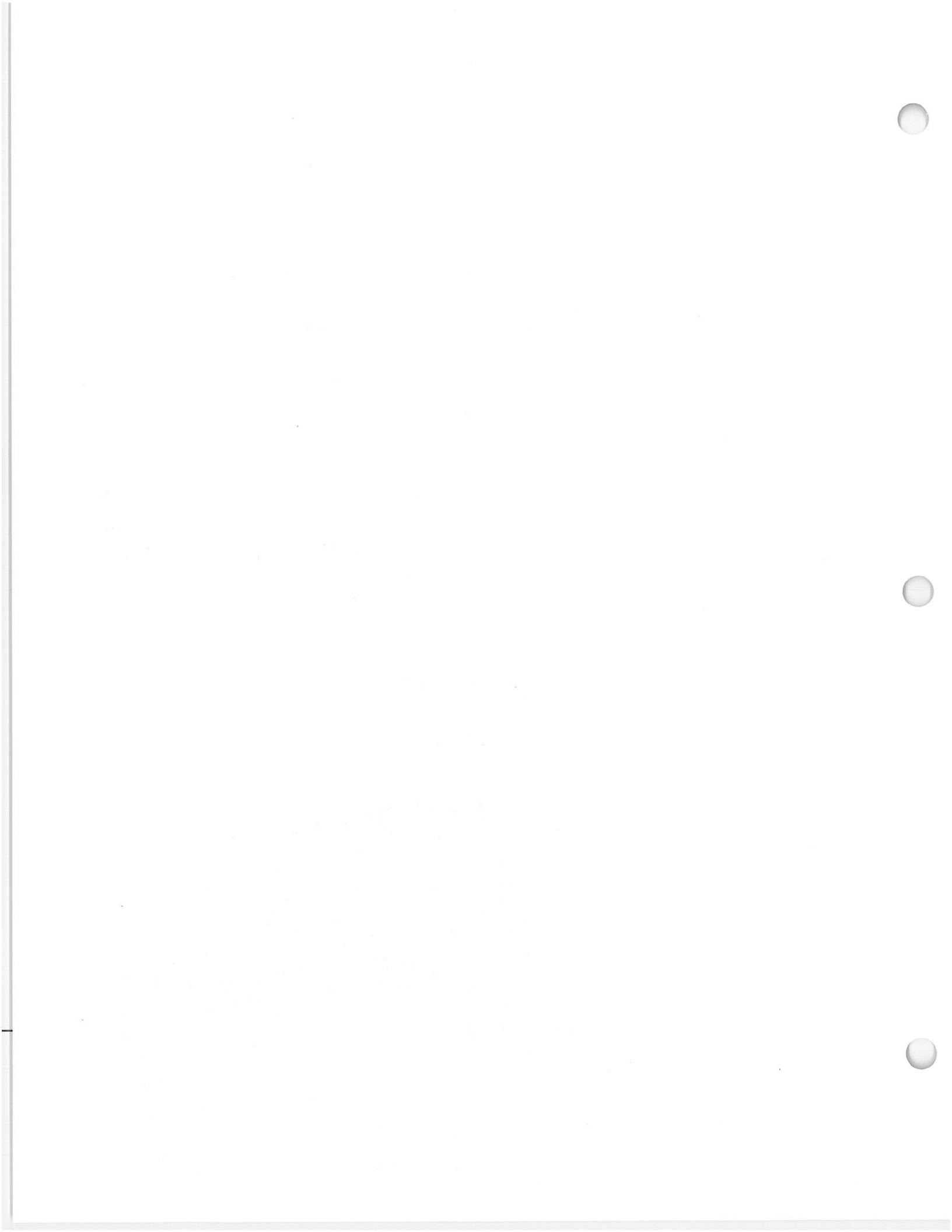
The two examples shown here demonstrate how conservation design principles can be used to protect different kinds of resources. In *Garnet Oaks*, a woodland wildlife preserve was set aside by the developer, who also constructed extensive walking trails. A well-equipped tot lot and an informal picnic grove provide additional amenities to the residents. At *Farmview*, 137 acres of productive farmland were permanently protected, in addition to most of the woodlands. This subdivision prompted the township to revise its conventional zoning so that the developer's creative design could be approved. Since that time over 500 acres of prime farmland has been preserved in this community through conservation subdivision design representing a \$3. million conservation achievement (at an average land value of \$7,000) and these figures continue to grow as further subdivisions are designed. The potential for replicating this and achieving similar results throughout the Commonwealth is enormous.

Garnet Oaks

Foulk Road, Bethel Township, Delaware County
Developer: Realen Homes, Ambler
Development Period: 1993-94

Just over half of this 58-acre site has been conserved as permanent privately-owned open space through the simple expedient of reducing lot sizes to the 10,000-12,000 sq. ft. range (approximately 1/4 acre). The developer reports that these lot sizes did not hinder sales because about two-thirds of the lots directly abut the densely wooded open space, which gives them the feel and privacy of larger lots. In fact, the evidence indicates that the open space definitely enhanced sales in two ways: increased





Growing Greener

prices (through premiums added to the prices of lots which abut the conservation areas).

The locations of these conservation areas were carefully selected after a comprehensive analysis of the site's natural and historic features had been conducted. Those secondary features that were identified for preservation included a line of mature sycamore trees along an existing farm lane, a stone wall and springhouse, and several areas of healthy deciduous upland woods, in addition to the site's delineated wetlands. Based on information received from post-sales interviews in its previous developments, Realen's staff learned that today's

homebuyers are considerably more discerning than they were 10 and 20 years ago, and now look for extra amenities not only in the houses but also in the neighborhood setting. This knowledge led Realen to take special measures to protect trees on individual houselots and within the street right-of-way. Their approach included collaborating with the Morris Arboretum in preparing a training manual for subcontractors and conducting training sessions in tree conservation practices, attendance at which was required of all subcontractors.

The centerpiece of Garnet Oaks' open space is the near mile-long wood-

land trail which winds its way through the 24-acre conservation area, connecting a well-equipped playground and a quiet picnic grove to the street system in three locations. Where the trail traverses areas of wet soils it is elevated on a low wooden boardwalk. This trail, which was cleared with assistance from a local Boy Scout Troop, features numerous small signs identifying the common and botanical names of the various plants and trees along the trail. Realen's staff also designed and produced an attractive eight-page trail brochure that illustrates and de-

scribes the flora, fauna, environmental areas, and historic features along the trail. The guide also explains the developer's creative use of low-lying woods as a temporary detention area for storm-water runoff, a naturalistic design that helped avoid a more conventional approach in which many trees within the preserve would have been removed to provide for a conventionally engineered basin. Realen's sales staff reported that prospective buyers who picked up a copy of the trail brochure and ventured out onto the trail typically decided to make their home purchase in Garnet Oaks.

Farmview

Woodside Road and Dolington Road, Lower Makefield Township, Bucks County

Developer: Realen Homes, Ambler

Development Period: 1990-96

Located on a 418-acre site, Farmview is a 322-lot "density-neutral" subdivision whose layout was designed to conserve 213 acres of land (51 percent of the property), including 145 acres of cropland and 68 acres of mature woods. While 59 percent of the original farmland was needed for development, 41 percent categorized as prime agricultural and farmland of statewide importance was able to be

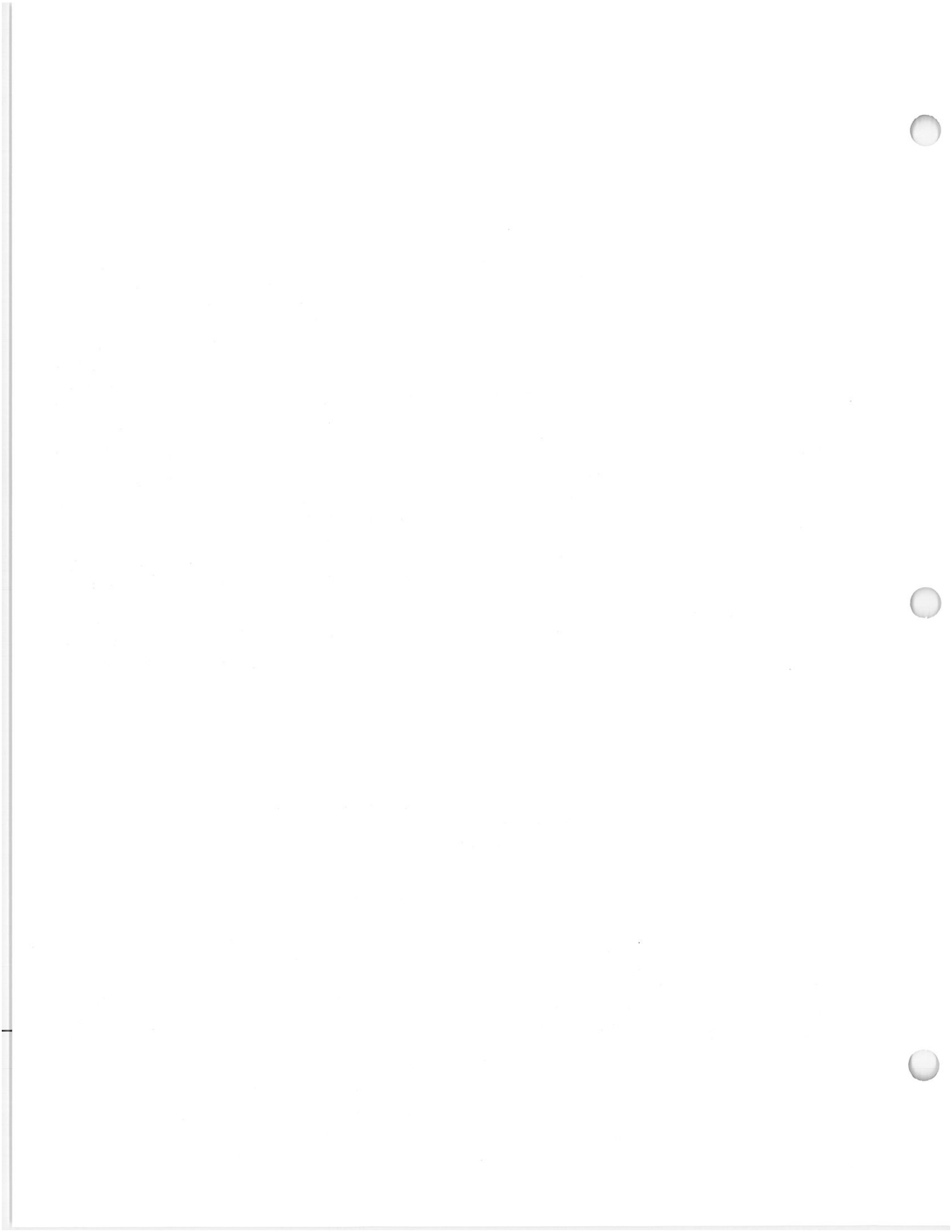
preserved in addition to nearly all of the wooded areas.

The 145 acres of farmland that have been saved were donated by the developer to the Lower Makefield Farmland Preservation Corporation, a local conservation organization whose members include local farmers, township residents and an elected official liaison. This cropland is leased to farmers in the community through multi-year agree-

ments that encourage adaptation of traditional farming practices to minimize impacts on the residents, whose yards are separated from their operations by a 75-foot deep hedgerow area thickly planted with native species trees and shrubs.

Realen Homes also donated the 68 acres of woodland to the township to support local conservation efforts in creating an extended network of forest

habitat and wildlife travel corridors. These areas also offer potential for an informal neighborhood trail system in future years. (The developer's offer to construct such trails was declined by the supervisors, citing liability concerns, despite the fact that other townships in the region actively encourage such trails in new subdivisions and also on township conservation lands.)



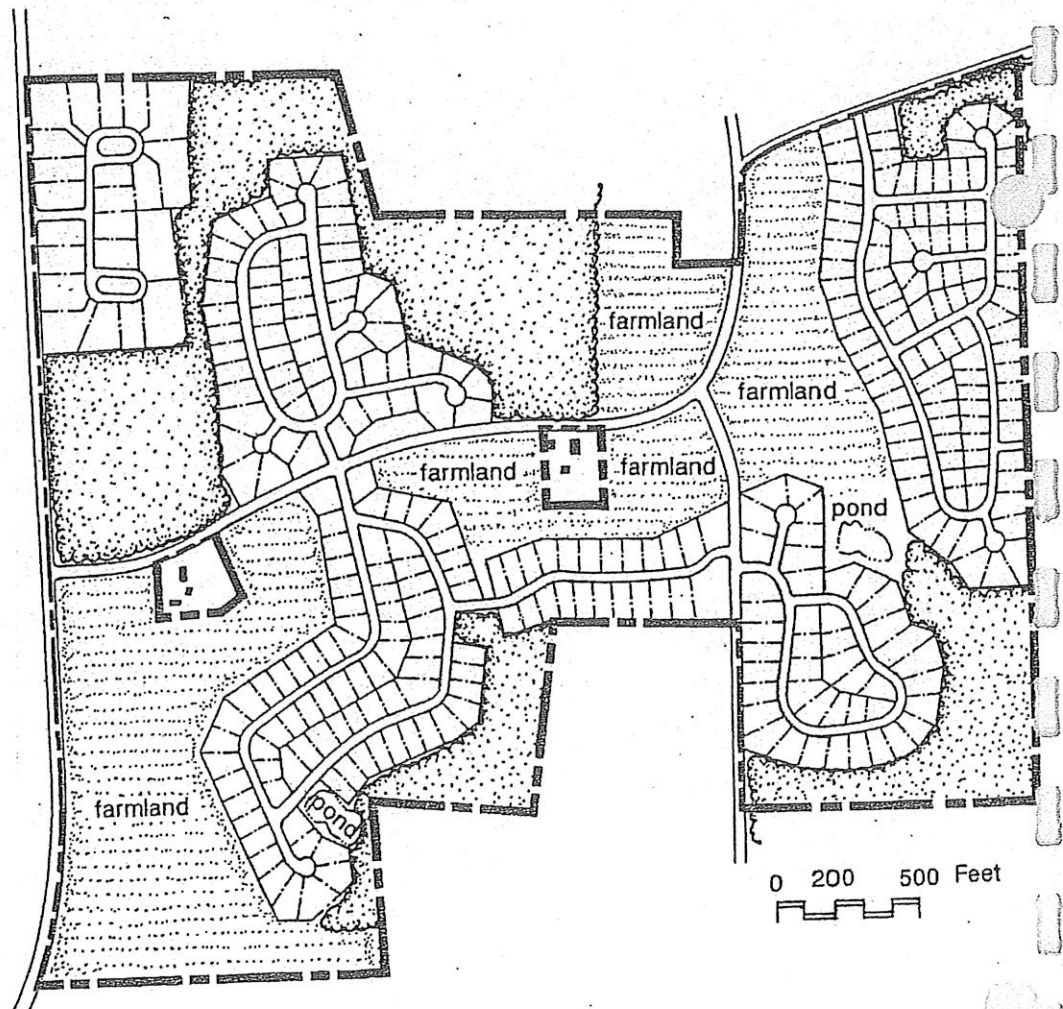
Growing Greener

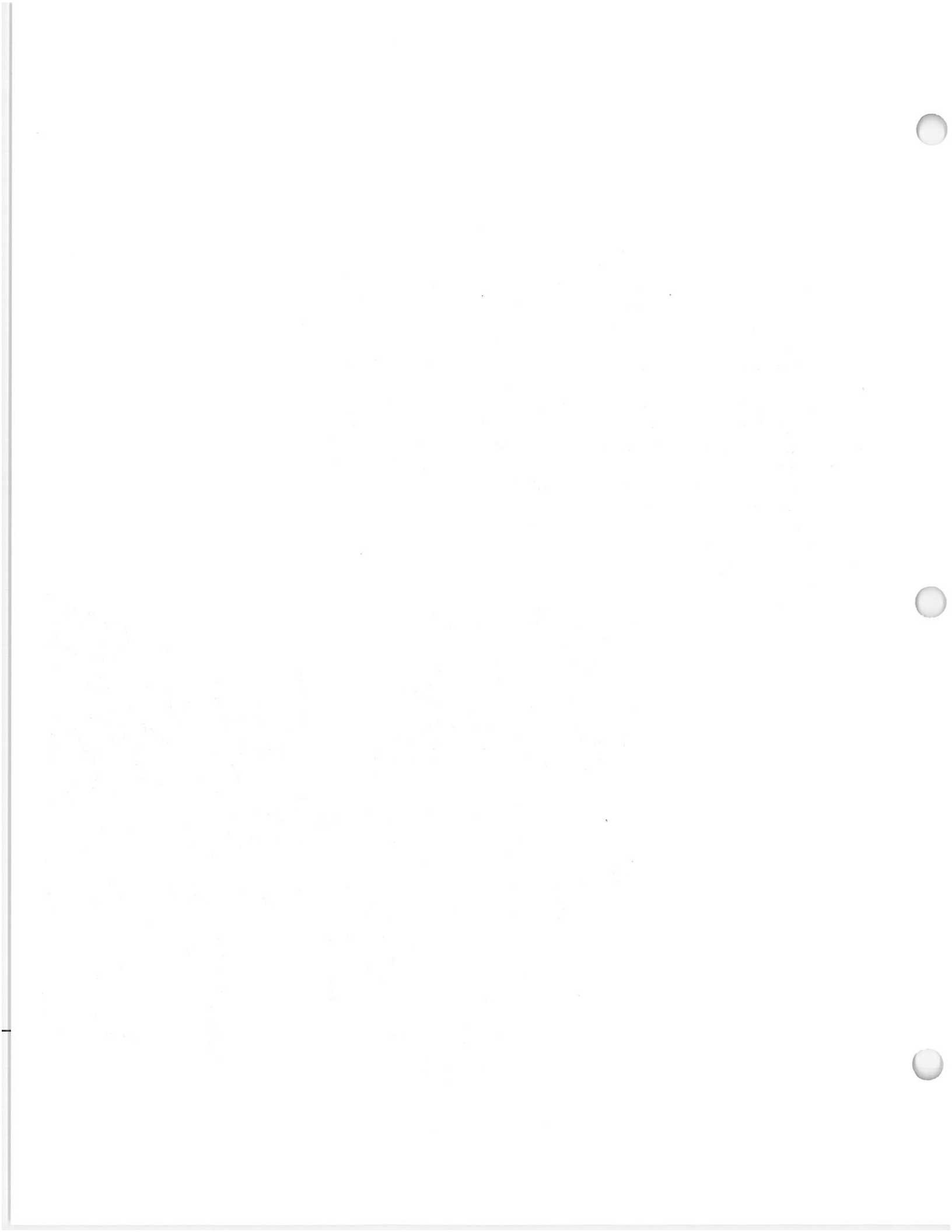
Had it not been for the developer's initiative and continued interest, this subdivision would have been developed into the same number of standard-sized one-acre lots, which was the only option permitted under the township's zoning ordinance in 1986 when Realen purchased the property. After 18 months of discussing the pros and cons of allowing smaller lots in exchange for serious land conservation benefits, the supervisors adopted new zoning provisions permitting such layouts specifically to preserve farmland when at least 51

percent of a property would be conserved. These regulations target the most productive soils as those which should be "designed around."

Although other developers were at first skeptical of Realen's proposal to build large homes (2,600-3,700 sq. ft.) on lots which were typically less than a half an acre in a marketplace consisting primarily of one acre zoning, the high absorption rate helped

convince them that this approach was sound. Contributing to the project's benefits to both the developer and the township were reduced infrastructure costs (for streets, water, and sewer lines). Premiums added to "view lots" abutting the protected fields or woods also contributed to the project's profitability.





Growing Greener

ECKERT SEAMANS CHERIN & MELLOTT, LLC

October 16, 1997

One South Market Sq. Building
213 Market Street
Post Office Box 1248
Harrisburg, PA 17108

Randall G. Arendt, Vice President
Conservation Planning
Natural Lands Trust, Inc.
1031 Palmers Mill Road
Media, PA 19063

Re: Conservation Planning Documents and
Growing Greener Workbook

Dear Mr. Arendt:

I have had the opportunity to review the *Growing Greener* workbook and the proposed conservation planning concepts set forth in that workbook for compliance with the provisions of the United States Constitution, the Pennsylvania Constitution, and the Pennsylvania Municipalities Planning Code (the "MPC"). In my opinion, the conservation planning concepts as set forth in the *Growing Greener* workbook are constitutional land use control concepts and the provisions comport with the requirements of the Pennsylvania Municipalities Planning Code.

The subdivision concept which provides for a conceptual preliminary plan and standards for that plan is authorized specifically under the MPC as part of the two-stage planning process allowed by Section 503(1) of the MPC. The Zoning Ordinance concept utilizes a multi-tiered zoning system with options available to the landowner under the Zoning Ordinance. Such a device is specifically authorized under Section 605 of the MPC which specifically encourages innovation and promotion of flexibility, economy and ingenuity in development based upon express standards and criteria. The proposed ordinances contained in the workbook satisfy that specific requirement.

The provisions of both the United States Constitution and the Pennsylvania Constitution require that the land use regulations be reasonable and be intended to benefit the public health, safety and welfare. The concept of providing a variety of options for choices by the landowner meets both the reasonableness and public purpose tests of constitutionality. The benefit of the *Growing Greener* concept is that there will be a greater amount of usable open space, while at the same time the landowners will be able to make reasonable use of their property under the options available as proposed in the workbook.

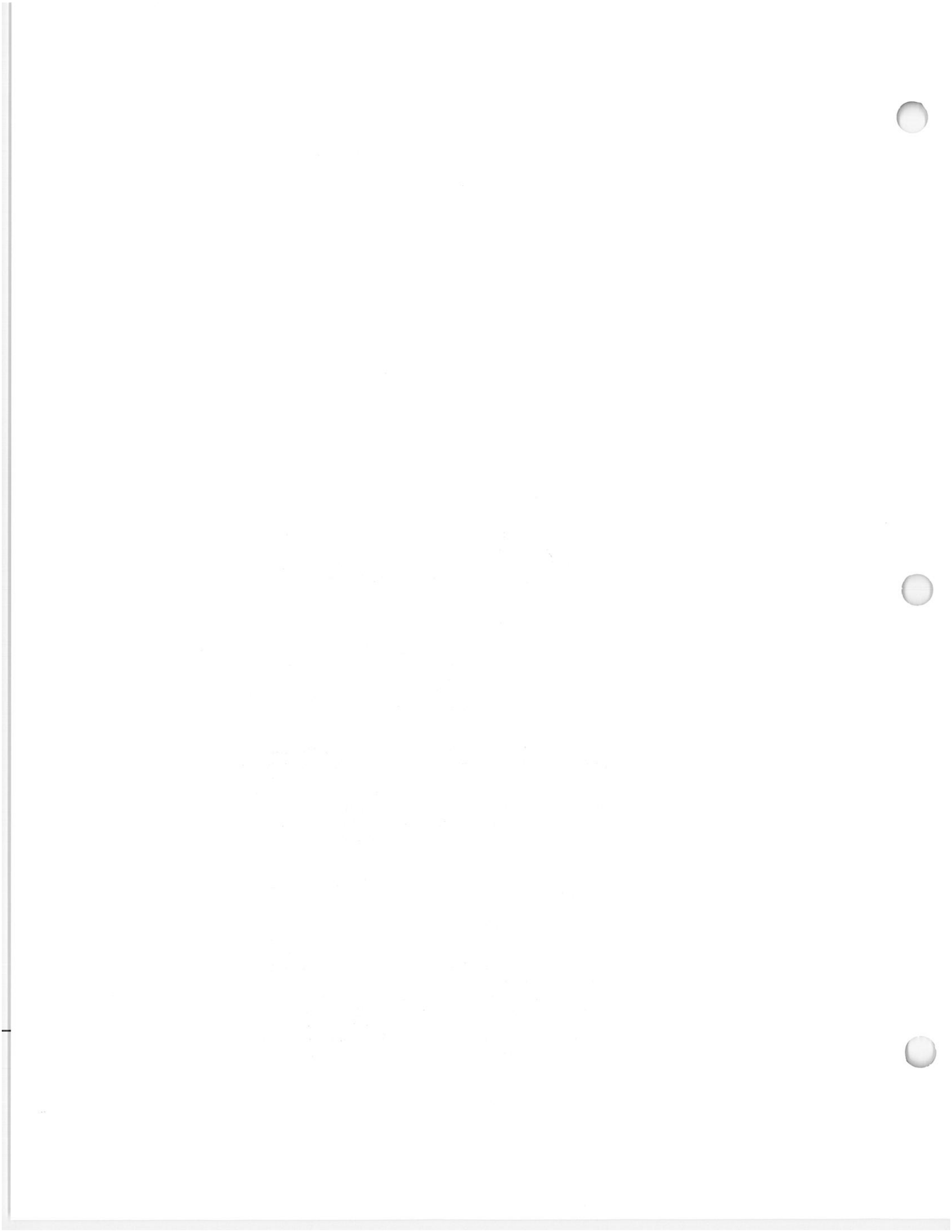
Individual municipalities within the Commonwealth of Pennsylvania will have to apply the concepts and will have to establish their own densities based upon the unique circumstances in each particular municipality. There can be no guarantee that all such ordinances will be constitutional unless they satisfy the requirements of being reasonable with regard to the locational circumstances of the particular property and community in question. However, it is my opinion that if the concepts and procedures set forth in the *Growing Greener* workbook are followed and that the densities and requirements reflect the unique circumstances of the individual municipality, that the *Growing Greener* concept is lawful and constitutional in the Commonwealth. The concepts set forth in the *Growing Greener* workbook provide a new method of addressing the pressures of growth and development throughout both the urban and rural portions of the Commonwealth of Pennsylvania, and I urge the municipal officials to give full consideration to these exciting new concepts.

Very truly yours,

Charles E. Zaleski

CEZ/jr

Harrisburg
Pittsburgh
Allentown
Philadelphia
Boston
Fort Lauderdale
Boca Raton
Miami
Tallahassee
Washington, D.C.

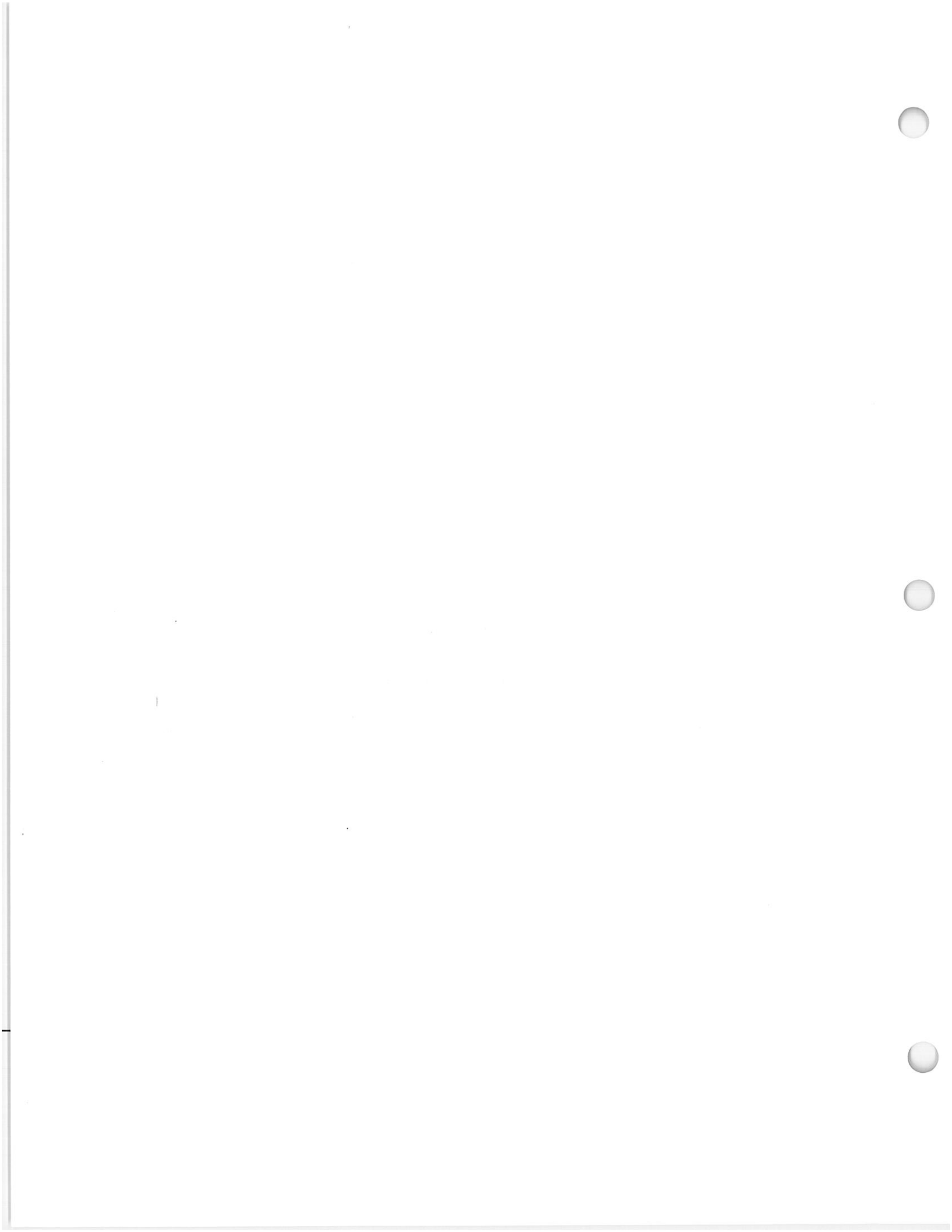






APPENDIX V

Government Assistance Programs



1.02 Community Development Block Grant (CDBG) Program

Description:

A state-administered, federal grant program to aid local governments in community and economic development efforts including housing. The applicant selects the CDBG-eligible activity for which to use the funds.

Eligible housing activities include acquisition, rehabilitation, and land clearance and site and public improvements to support new housing. Single-unit housing must benefit low- and moderate-income households while multi-unit housing must demonstrate that 51 percent or more of the households are of low and moderate income according to income limits for each county as established by the Department of Housing and Urban Development (HUD).

Eligibility:

Counties and municipalities, which are not designated by HUD as urban counties or entitlement municipalities, are eligible to apply in accordance with the provisions of Pennsylvania Act 179.

(HUD-designated urban counties and entitlement municipalities apply directly to that agency.)

Additional Information:

This program is administered by the Small Communities Program Division, Bureau of Housing and Development, Department of Community Affairs, 515 Forum Building, Harrisburg, PA 17120, (717) 783-3910. Applications for funding should be submitted to Regional Offices of the Department of Community Affairs.

Funding (Federal):

Expenditures in federal fiscal year 1988 for only housing rehabilitation and construction projects totalled \$7,255,396.

1.07 Housing and Community Development Program

Description:

A grant program to assist in development or rehabilitation of housing for low- and moderate-income residents and with community development projects. Eligible activities for housing assistance grants include the following types of projects:

- The provision of pre-development or development expenses for the construction or rehabilitation of subsidized housing projects if such funds are essential but unavailable from other sources; *
- The rehabilitation of owner-occupied residential properties whose owners have incomes which qualify under low- and moderate-income guidelines;
- The rehabilitation of investor-owned properties whose tenants have incomes which qualify under low- and moderate-income guidelines; **
- The rehabilitation and new construction of housing for low- and moderate-income individuals through the use of tax-exempt bond financing; *

Eligibility:

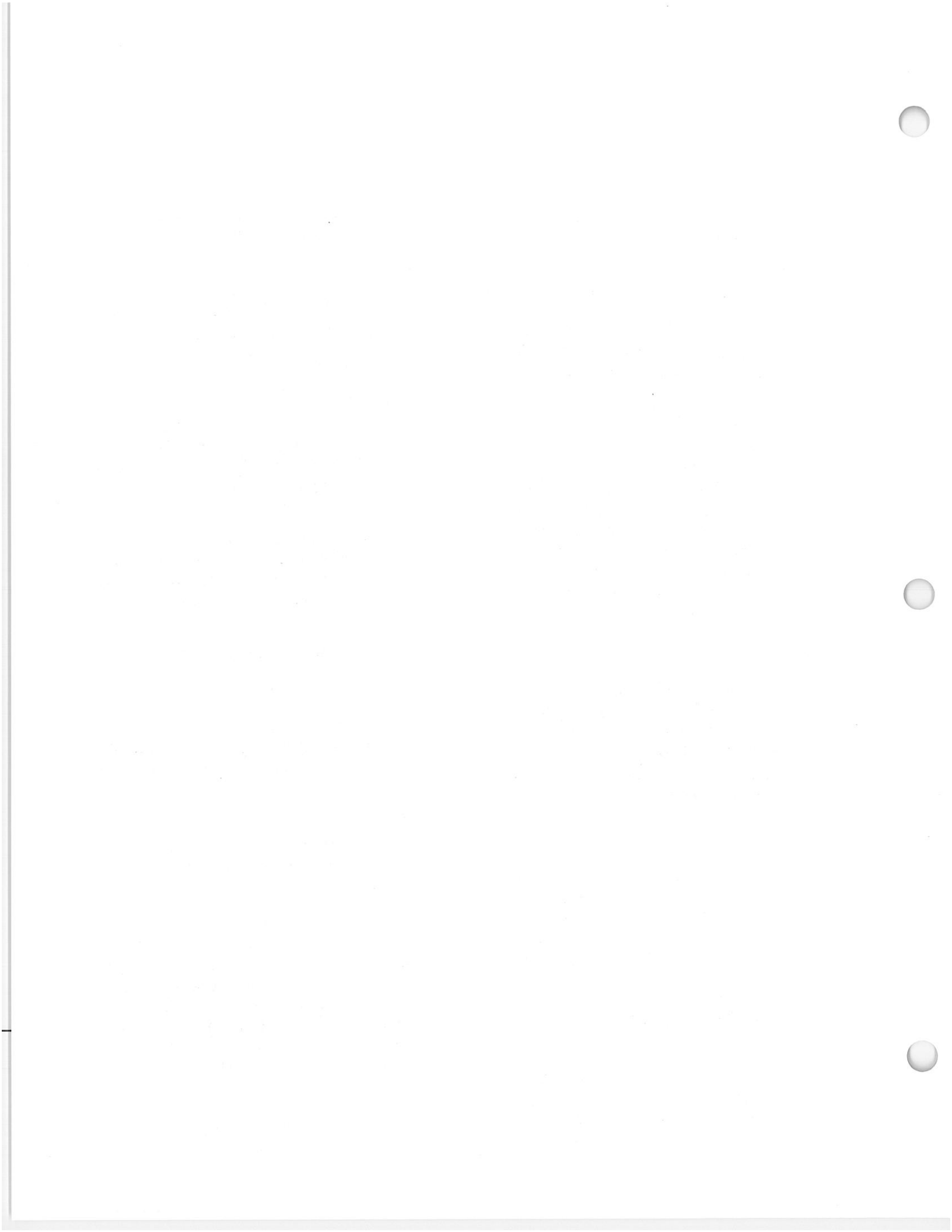
Any community organization, political subdivision, authority, corporation, association or person.

Additional Information:

This program is administered by the Bureau of Human Resources, Department of Community Affairs, 358 Forum Building, Harrisburg, PA 17120, (717) 787-4140. Applications for funding should be submitted to Regional Offices of the Department of Community Affairs.

Funding (State):

Expenditures in fiscal year 1988-89, for housing initiatives only, totalled \$58,500.



1.10 Weatherization

Description:

A grant program to assist local agencies in providing weatherization services to income-eligible households (150 percent of the poverty level). Services include air leakage control measures, the installation of attic insulation and venting, minor repairs, the installation of storm windows and doors, heating system modifications, and related measures. Services are limited to an average of \$1,600 per unit for both weatherization measures and program support costs.

Eligibility:

Counties, municipalities, and nonprofit organizations.

Additional Information:

This program is administered by the Bureau of Human Resources, Department of Community Affairs, 358 Forum Building, Harrisburg, PA 17120, (717) 783-2576. Applications for funding should be submitted to the bureau or regional offices of the Department of Community Affairs.

Funding (Federal):

Expenditures for fiscal year 1988-89 totalled \$32,719,124.

2.07 Single-Family Homeownership Program

Description:

A loan program which, through the sale of mortgage revenue bonds, provides low-interest, 30-year residential mortgages for both new and existing homes. Loans are originated by local lenders and are available in every county of the state. There are income eligibility requirements, and also sales price maximums according to county location. Participants have average incomes of \$22,300 and buy homes with prices averaging \$50,000.

Eligibility:

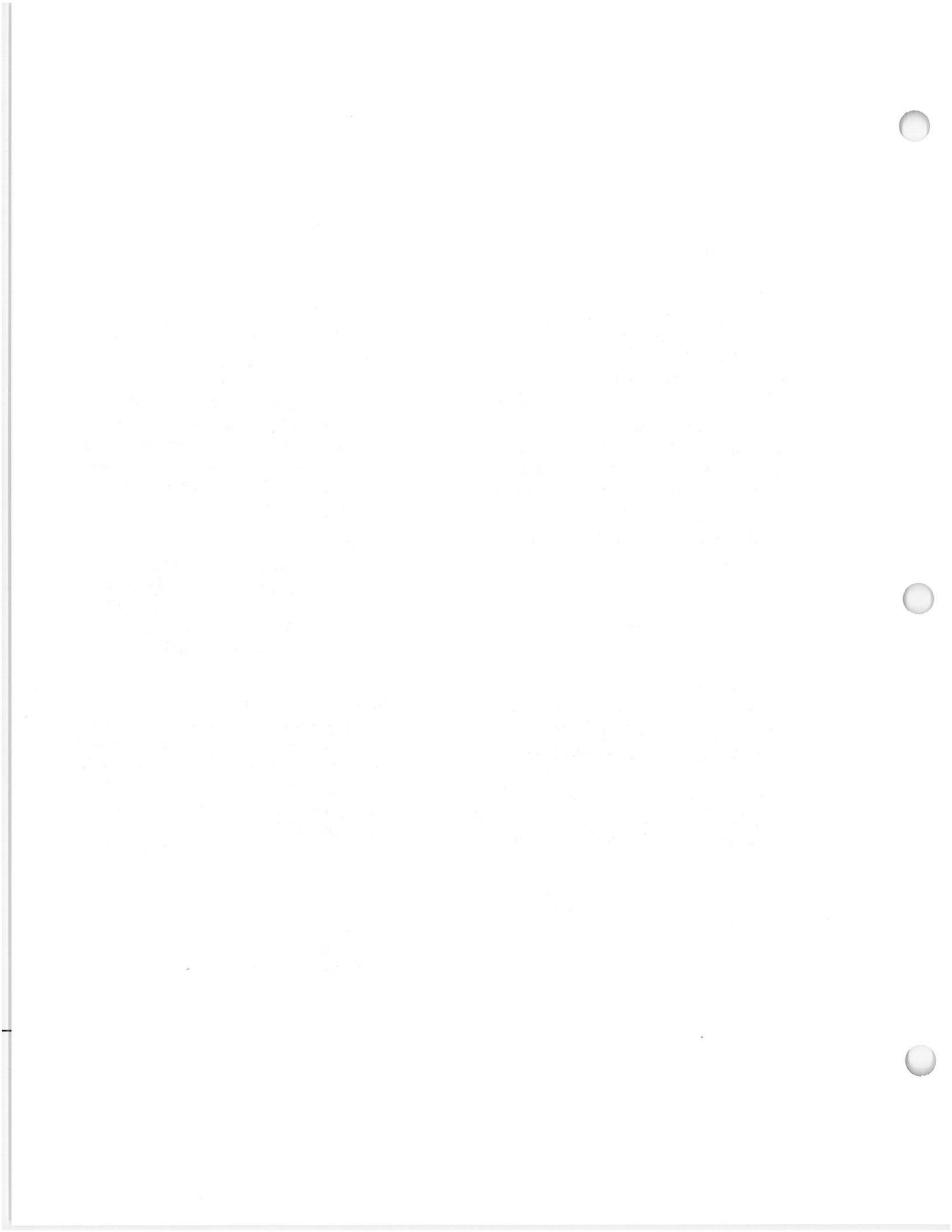
First-time homebuyer, defined as a buyer who has not owned a home in the past three years except in certain target communities where this requirement does not apply, who meets income eligibility requirements.

Additional Information:

This program is administered by the Single Family Division, PA Housing Finance Agency, 2101 North Front Street, Harrisburg, PA 17105-8029, (717) 780-3871. Applications for funding should be submitted to participating lending institutions, after obtaining from the PA Housing Finance Agency the dates for the next bond issue.

Funding (Mortgage Revenue Bond sale proceeds):

Expenditures (loans) in fiscal year 1988-89 totalled \$164,587,000.



3.10 General Assistance

Description:

A cash assistance program to help persons pay for basic needs including housing. For General Assistance payments, the 67 counties are divided into four different payment schedules. The applicant's net monthly income must be less than a certain amount, based on family size. The maximum General Assistance payment is equivalent to the prescribed income limit. For example, using the schedule which applies to a majority of applicants, for a family of three persons the applicant's net monthly income must be less than \$384, which would also be the maximum monthly General Assistance payment for such person. There is a resource limit of \$1,000 for all family sizes except for one person alone the limit is \$250. Persons may continue to receive General Assistance as long as they continue to meet eligibility requirements, except that employable persons (age 18 to 45) can receive cash payments for only 90 days every 12 months.

Eligibility:

Pennsylvania residents who meet income and resources requirements.

Additional Information:

This program is administered by the Office of Income Maintenance, Department of Public Welfare, 432 Health and Welfare Building, Harrisburg, PA 17120, (717) 783-3063. Application information can be obtained from the Department of Public Welfare County Assistance Office in each county.

Funding (State):

Expenditures for fiscal year 1988-89 totalled \$266,693,000.

5.01 Property Tax or Rent Rebate Program

Description:

A cash assistance program in the form of annual rebates for property taxes or rents paid by eligible claimants. An inflation dividend accompanies the rebate. A claimant must apply yearly. The owner/landlord of a rental property must have paid property taxes on the rental unit or payments in lieu of property taxes to a local government. Only one member of a household may file a claim even if other household members are otherwise eligible. Applications must be filed by June 30 of the year following the year for which the rebate is claimed (the claim year).

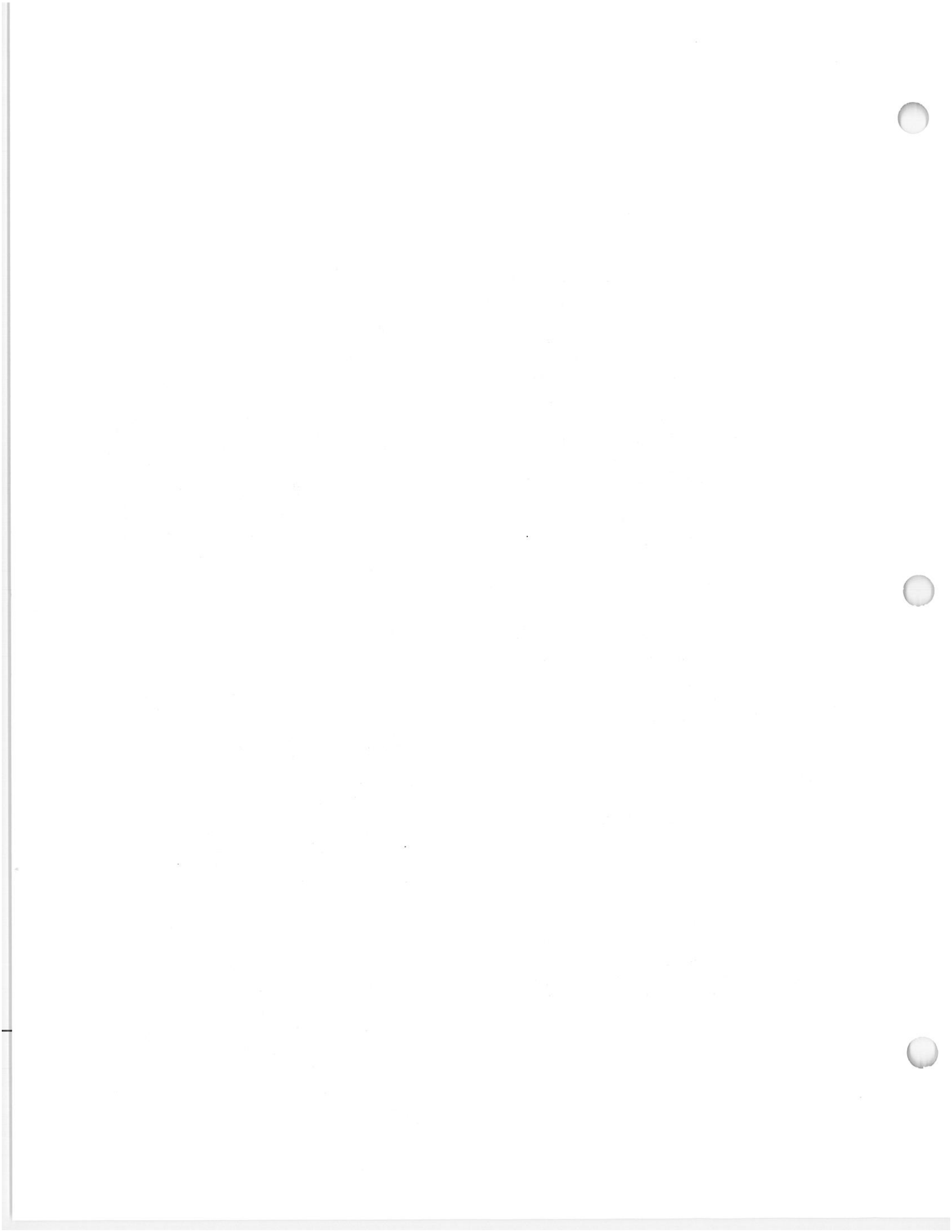
Eligibility:

Persons who owned and occupied or rented and occupied their primary residence in Pennsylvania during the claim year. The total income of the claimant's household must not have exceeded \$15,000 during the claim year. In addition, the claimant must have been:

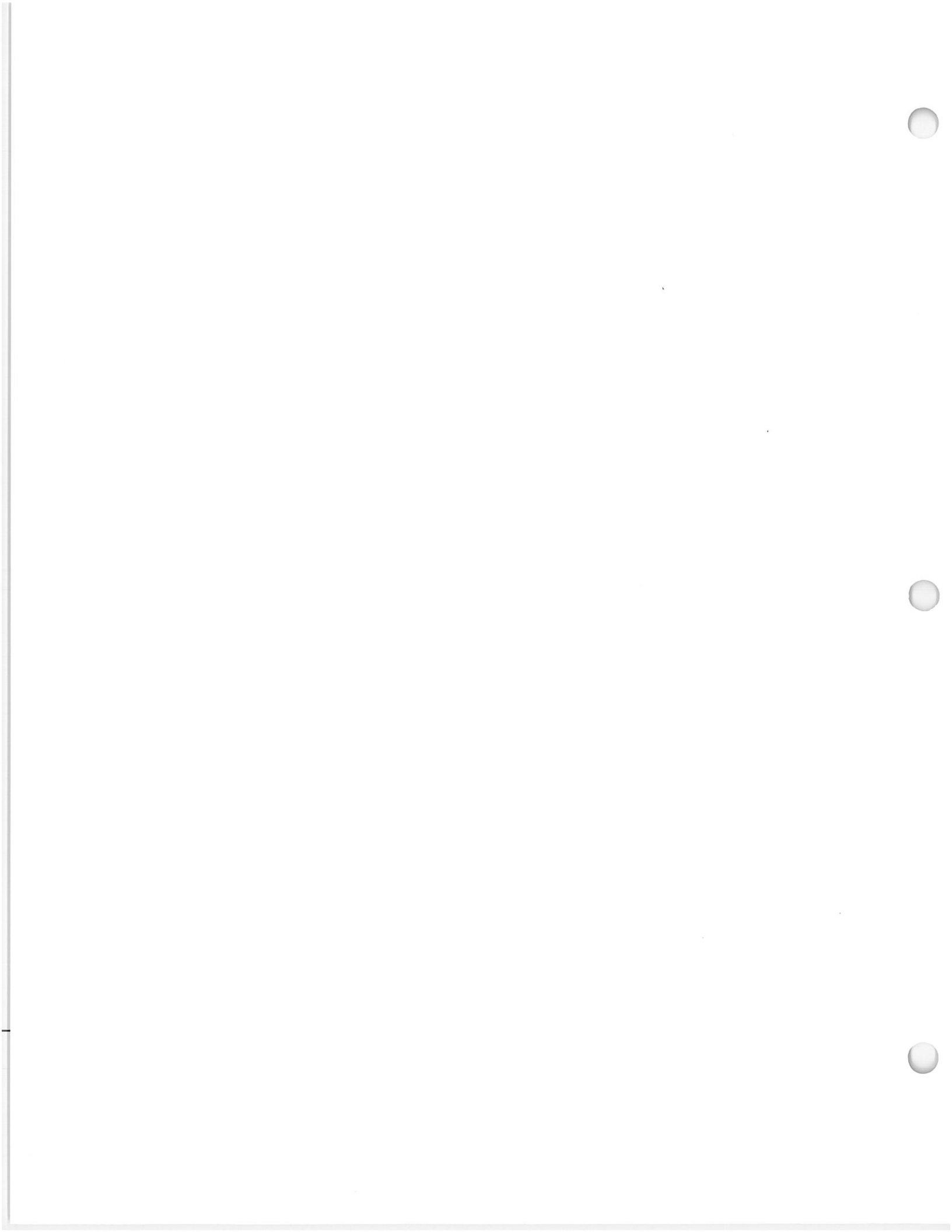
- (a) age 65 or older as of December 31 of the claim year; or
- (b) married to a person age 65 or older as of December 31 of the claim year; or
- (c) a widow or widower for all of the claim year and age 50 or older; or
- (d) permanently disabled for all or part of the claim year and 18 years of age or older.

Additional Information:

This program is administered by the PA Department of Revenue, P. O. Box 2780, Harrisburg, PA 17105-2780, (717) 787-8201, 1-800-SRC-LAIM (1-800-772-5246). Application form can be obtained from the department, local senior citizens centers or state liquor stores.



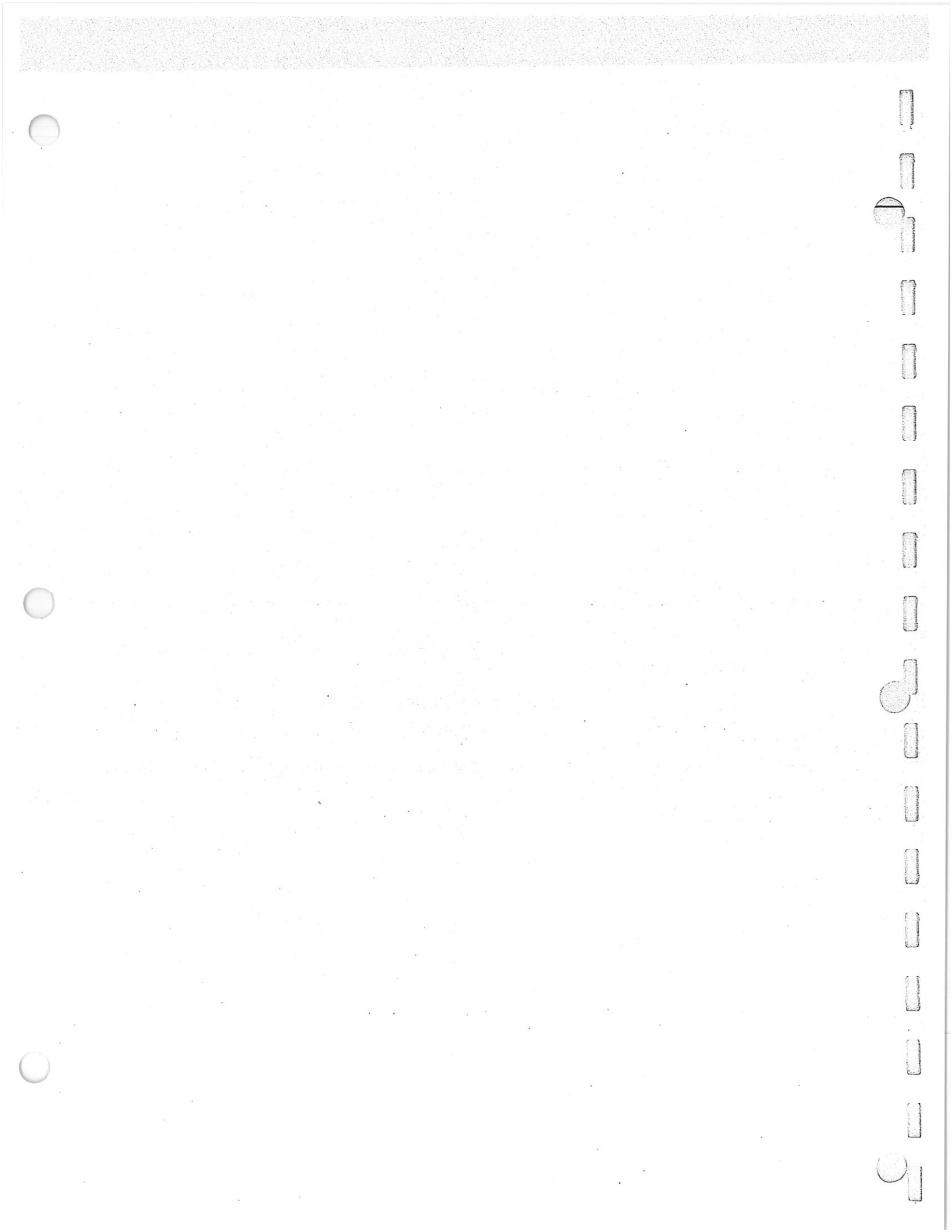


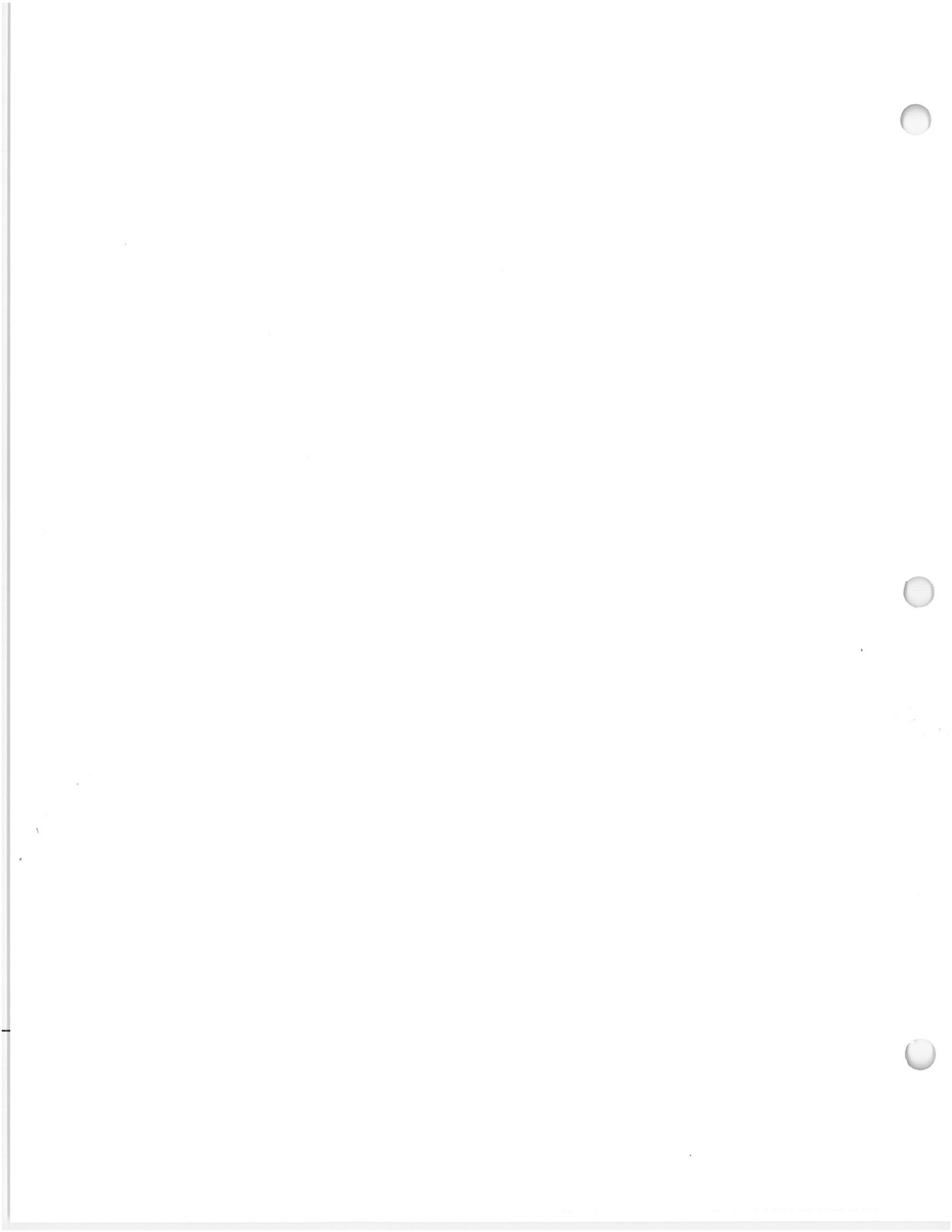


APPENDIX VI

**Municipalities Planning Code
Section 401**

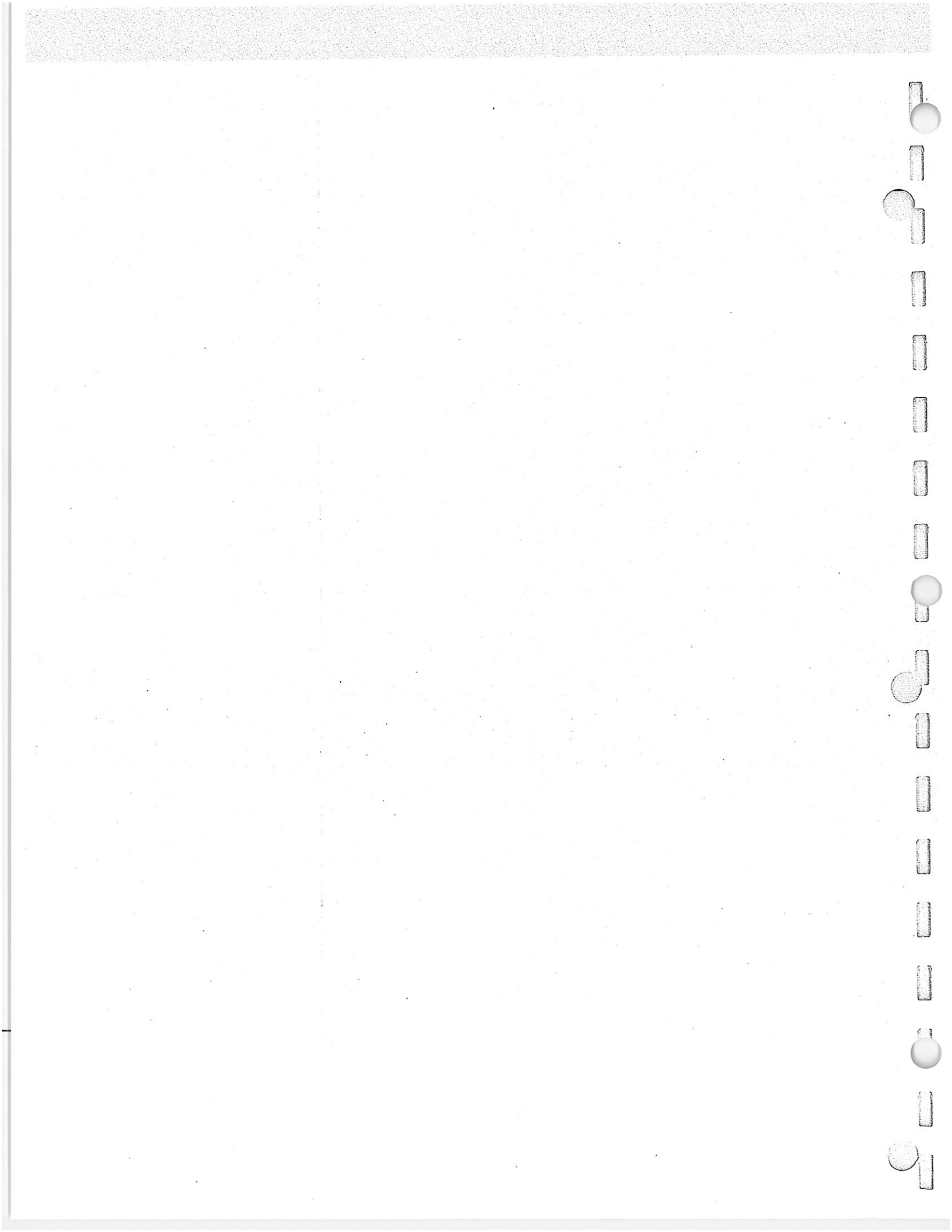






APPENDIX VI

**Municipalities Planning Code
Section 401**



ARTICLE IV

Official Map

Section 401. Grant of Power. --

(a) The governing body of each municipality shall have the power to make or cause to be made an official map of all or a portion of the municipality which may show appropriate elements or portions of elements of the comprehensive plan adopted pursuant to section 302 with regard to public lands and facilities, and which may include, but need not be limited to:

(1) Existing and proposed public streets, watercourses and public grounds, including widenings, narrowings, extensions, diminutions, openings or closing of same.

(2) Existing and proposed public parks, playgrounds and open space reservations.

(3) Pedestrian ways and easements.

(4) Railroad and transit rights-of-way and easements.

(5) Flood control basins, floodways and flood plains, storm water management areas and drainage easements.

(6) Support facilities, easements and other properties held by public bodies undertaking the elements described in section 301.

(b) For the purposes of taking action under this section, the governing body or its authorized designee may make or cause to be made surveys and maps to identify, for the regulatory purposes of this article, the location of property, trafficway alignment or utility easement by use of property records, aerial photography, photogrammetric mapping or other method sufficient for identification, description and publication of the map components. For acquisition of lands and easements, boundary descriptions by metes and bounds shall be made and sealed by a licensed surveyor.



APPENDIX VII

"The Dirty Dozen Checklist"





The Dirty Dozen Checklist...

Are they hiding in your child's playground?

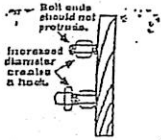


1. Improper Protective Surfacing
The surface or ground under and around the playground equipment should be soft enough to cushion a fall. Improper surfacing material under playground equipment is the leading cause of playground related injuries. Over seventy percent of all accidents on playgrounds are from children falling. Hard surfaces such as concrete, blacktop, packed earth or grass are not acceptable under play equipment. A fall onto one of these hard surfaces could be life threatening.

There are many surfaces that offer protection from falls. Acceptable surfaces are hardwood fiber/mulch, sand, and pea gravel. These surfaces must be maintained at a depth of twelve inches, be free of standing water and debris, and not be allowed to become compacted. There are also synthetic or rubber tiles and mats that are appropriate for use under play equipment.

2. Inadequate Fall Zone
A fall zone or use zone is the area under and around the playground equipment where a child might fall. A fall zone should be covered with protective surfacing material and extend a minimum of six feet in all directions from the edge of stationary play equipment such as climbers and chin up bars. The fall zone at the bottom or exit area of a slide should extend a minimum of six feet from the end of the slide for slides four feet or less in height. For slides higher than four feet, take the entrance height of the slide and add four feet to determine how far the surfacing should extend from the end of the slide. Swings require a much greater area for the fall zone. The fall zone should extend two times the height of the pivot or swing hanger in front of and behind the swings seats. The fall zone should also extend six feet to the side of the support structure.

3. Protrusion & Entanglement Hazards
A protrusion hazard is a component or piece of hardware that might be capable of impaling or cutting a child if a child should fall against the hazard. Some protrusions are also capable of catching strings or items of clothing which might be worn around a child's neck. This type of entanglement is especially hazardous because it might result in strangulation. Examples of protrusion and entanglement hazards includes bolt ends that extend more than two thread beyond the face of the nut, hardware configurations that form a hook or leave a gap or space between components and open "S" type hooks. Rungs or handholds that protrude outward from a support structure may be capable of penetrating the eye socket. Special attention should be paid to the area at the top of slides and sliding devices. Ropes should be anchored securely at both ends and not be capable of forming a loop or a noose.



4. Entrapment in Openings
Enclosed openings on playground equipment must be checked for head entrapment hazards. Children often enter openings feet first and attempt to slide through the opening. If the opening is not large enough it may allow the body to pass through the opening and entrap the head. Generally, there should be no openings on playground equipment that measures between three and one half inches and nine inches. Where the ground forms the lower boundary of the opening is not considered to be hazardous. Pay special attention to openings at the top of a slide, openings between platforms and openings on climbers where the distance between rungs might be less than nine inches.

5. Insufficient Equipment Spacing
Improper spacing between pieces of play equipment can cause overcrowding of a play area which may create several hazards. Fall zones for equipment that is higher than twenty-four inches above the ground cannot overlap. Therefore there should be a minimum of twelve feet in between two play structures. This provides room for children to circulate and prevents the possibility of a child falling off of one structure and striding another structure. Swings and other pieces of moving equipment should be located in an area away from other structures.

6. Trip Hazards
Trip hazards are created by play structure components or items on the playground. Exposed concrete footings, abrupt changes in surface elevations, containment borders, tree roots, tree stumps and rocks are all common trip hazards that are often found in play environments.

7. Lack of Supervision
The supervision of a playground environment directly relates to the overall safety of the environment. A play area should be designed so that it is easy for a parent or caregiver to observe the children at play. Young children are constantly challenging their own abilities, very often not being able to recognize potential hazards.

It is estimated that over forty percent of all playground injuries are directly related to lack of supervision in some way. Parents must supervise their children in some way on the playground!

8. Age-Inappropriate Activities
Children's developmental needs vary greatly from age two to age twelve. In an effort to provide a challenging and safe play environment for all ages it is important to make sure that the equipment in the playground setting is appropriate for the age of the intended user. Areas for preschool age children should be separate from areas intended for school age children.

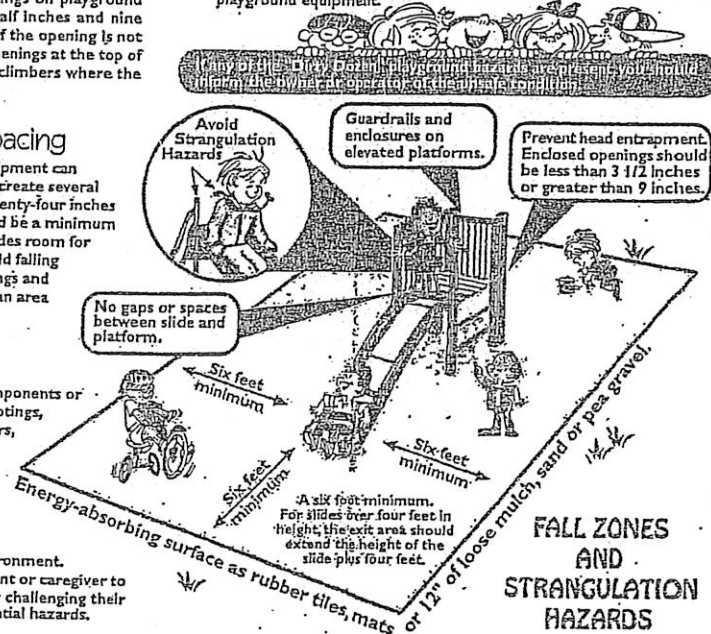
9. Lack of Maintenance
In order for playgrounds to remain in "safe" condition a program of systematic, preventive maintenance must be present. There should be no missing, broken or worn-out components. All hardware should be secure. The wood, metal, or plastic should not show signs of fatigue or deterioration. All parts should be stable with no apparent signs of loosening. The surfacing material must also be maintained. Check for signs of vandalism.

10. Pinch, Crush, Shearing, and Sharp Edge Hazards
Components in the play environment should be inspected to make sure that there are no sharp edges or points that could cut skin. Moving components such as suspension bridges, track rides, merry-go rounds, seesaws and some swings should be checked to make sure that there are no moving parts or mechanisms that might crush or pinch a child's finger.

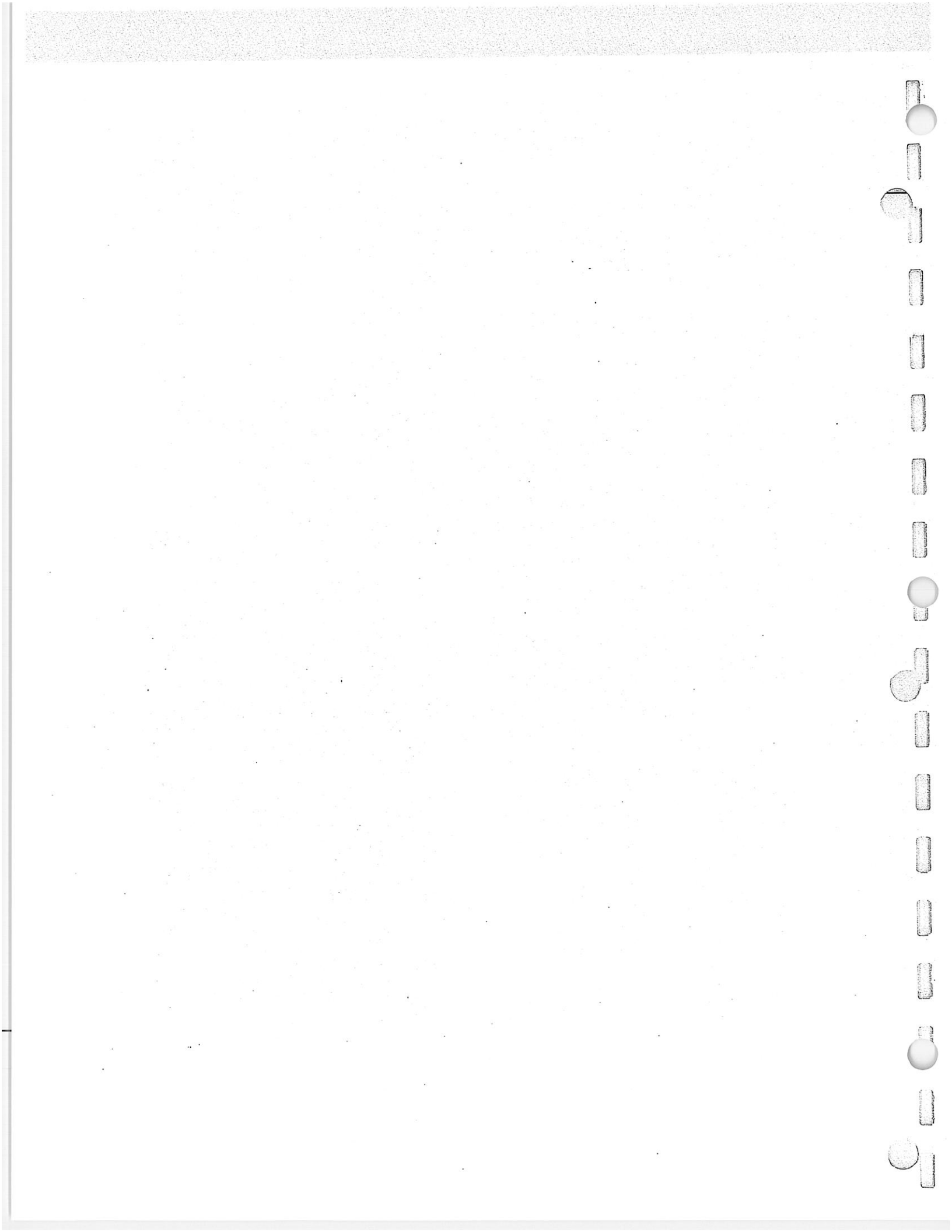
11. Platforms with No Guardrails
Elevated surfaces such as platforms, ramps, and bridgeways should have guardrails that would prevent accidental falls. Preschool age children are more at risk from falls and equipment intended for this age group should have guardrails on elevated surfaces higher than twenty inches. Equipment intended for school-age children should have guardrails on elevated surfaces higher than thirty inches.

12. Equipment Not Recommended for Public Playgrounds
Accidents associated with the following types of equipment have resulted in the Consumer Product Safety Commission recommending that they not be used on public playgrounds:

- * Heavy swings such as animal figure swings & multiple occupancy/glider type swings,
- * Free swinging ropes that may fray or form a loop,
- * Swinging exercise rings and trapeze bars are considered athletic equipment and not recommended for public playgrounds. Overhead hanging rings that have a short amount of chain and are intended for use as a ring trek (generally four to eight rings) are allowed on public playground equipment.

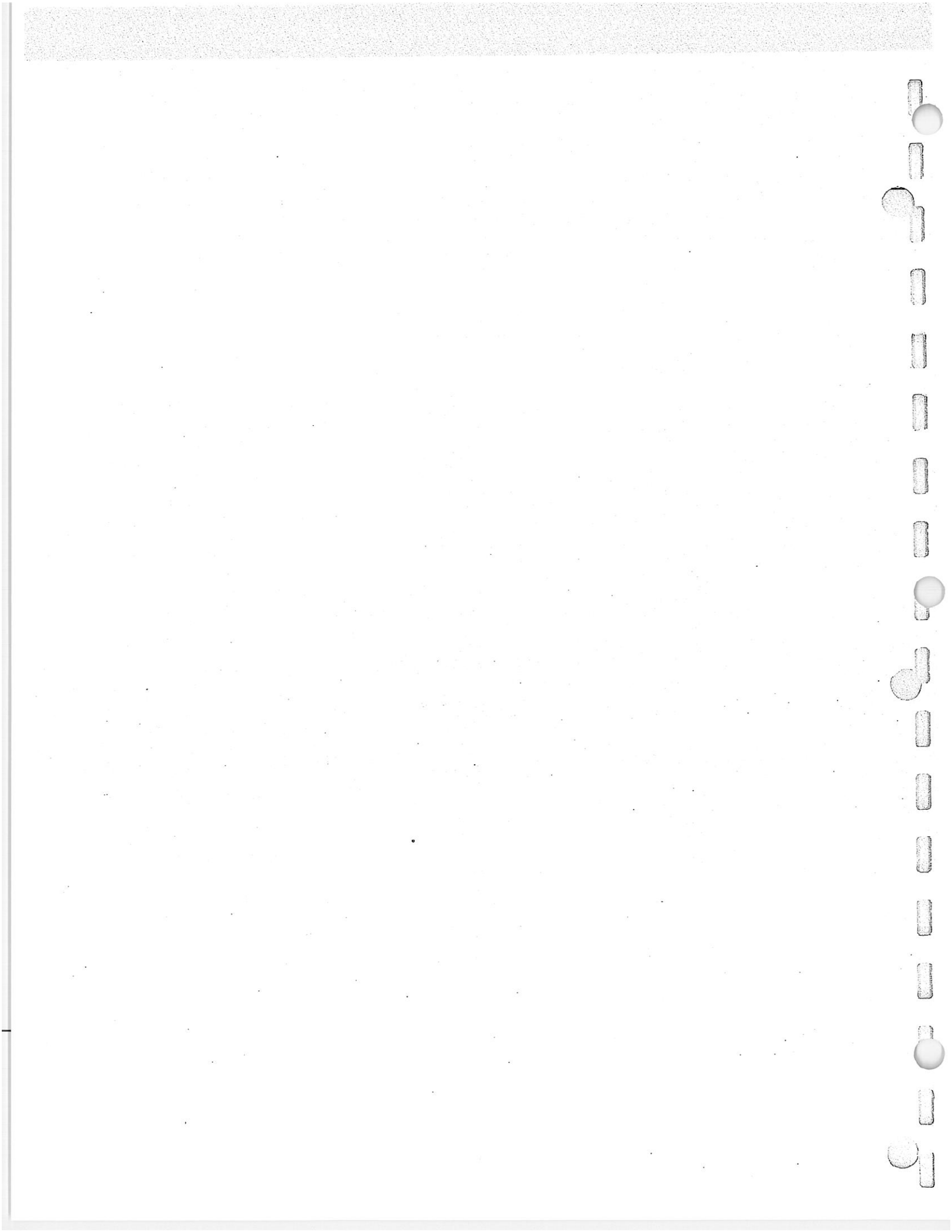


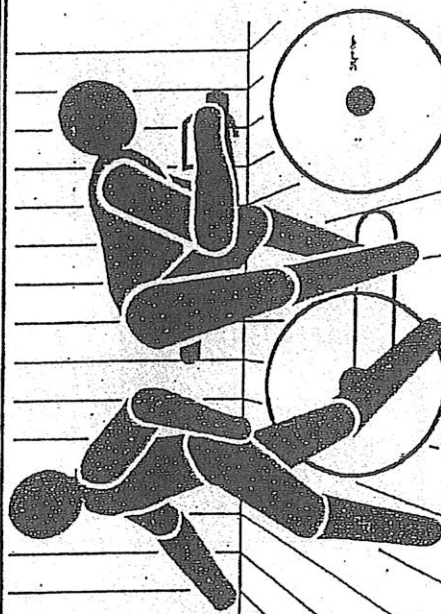
FALL ZONES AND STRANGULATION HAZARDS



APPENDIX VIII

Bicycle Path





Statewide Bicycle & Pedestrian Master Plan

Bicycling & Walking in Pennsylvania
A Companion for the 21st Century

Prepared for:
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
MAY 1996



Prepared for:

Commonwealth of Pennsylvania

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Governor

Bradley L. Mallory
Secretary of Transportation

Pennsylvania Department of Transportation
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Rails-to-Trails Conservancy

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- League of American Bicyclists Prevention Magazine

And all those who participated in the Statewide Public Meetings and Workshops.

Preface

The Pennsylvania Department of Transportation's Statewide Bicycle and Pedestrian Master Plan is a compilation of five documents, each with a specific purpose toward integration of bicycles and pedestrians into the State's transportation system.

These documents include:

- Executive Summary
- Statewide Bicycle and Pedestrian Master Plan
- Bicycle Planning and Design Guidelines
- Pedestrian Planning and Design Guidelines
- Community Design Systems

The "Executive Summary" highlights the key elements of the policy document and is intended as an informational resource for a broad range of users. The "Master Plan" is a policy document that discusses the vision, goals, issues, actions and implementation strategies necessary to integrate bicycles and pedestrians into the transportation system. It supersedes the 1976 Bicycle and Pedestrian Plan. There are two documents that supplement the policy plan by providing planning and design guidelines for pedestrian and bicycle compatible roadways and facilities; these are the "Pedestrian Planning and Design Guidelines" and "Bicycle Planning and Design Guidelines." In addition, the "Community Design Systems" document has been developed to address walking and bicycling issues at the local level for the various types of communities and places in Pennsylvania.

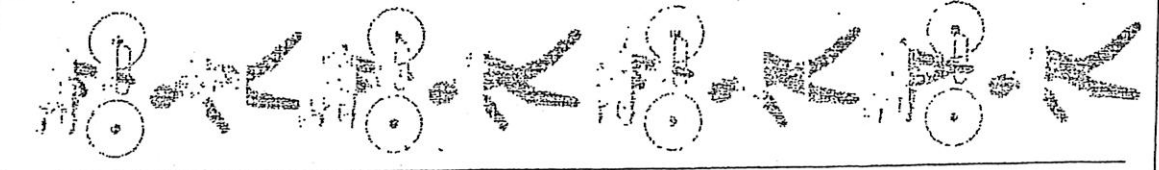
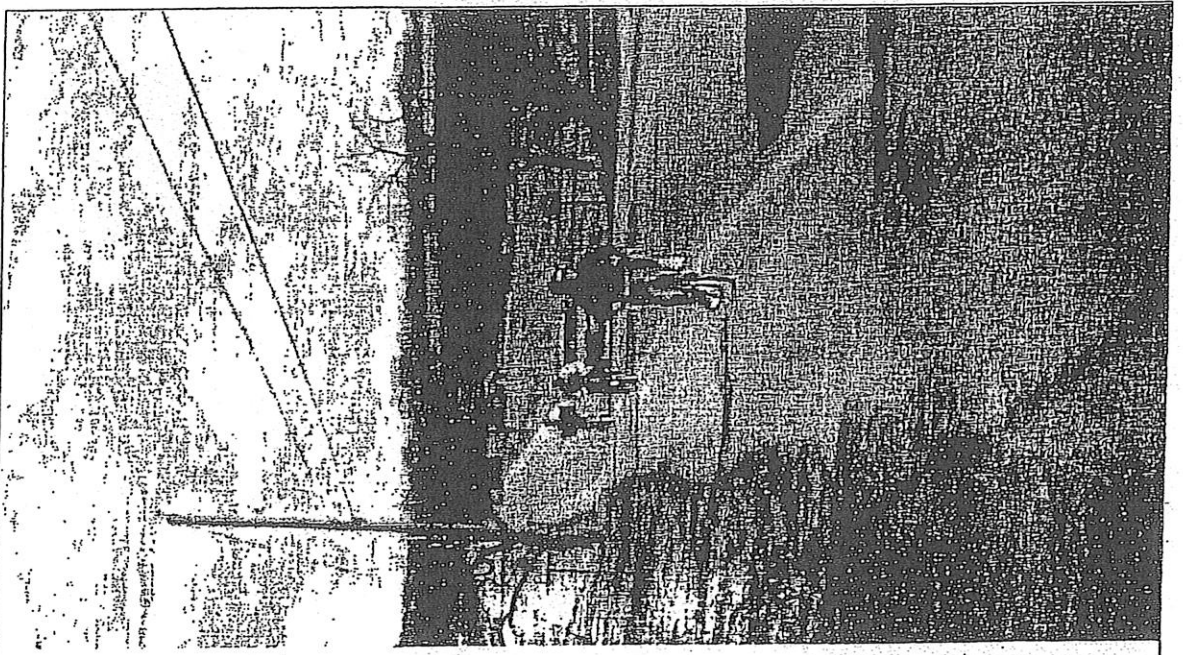
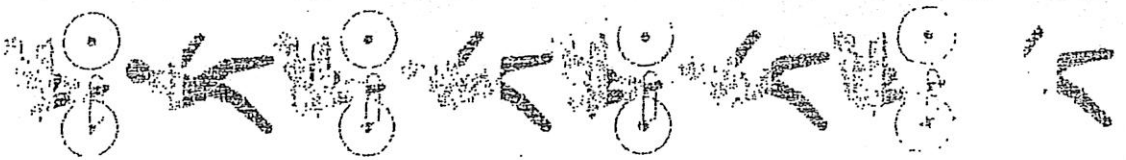
The Executive Summary presents key elements of the plan. To obtain additional copies or further information, please contact:

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Bicycling and Walking in Pennsylvania A Contract for the 21st Century

Twenty years from now, more Pennsylvanians will want to be able to walk and bicycle for fun, fitness and everyday travel. The two activities are already popular throughout the state, and almost as many people walk and bicycle to work as take transit. Thousands more people live close enough to work, school or shops to travel by foot or bike — and would likely do so if it were more convenient and safer.

The benefits of bicycling and walking are clear and compelling:

- Individuals can become healthier and more productive with regular exercise
- Bicycling and walking are inexpensive travel and recreation choices
- Air pollution, congestion and demand for parking can be reduced
- Bicycling and walking are the primary means of transportation for children and households with no car or driver available.

Bicycling and walking have a lot to offer Pennsylvania.

More than 10,000 people belong to bicycling, walking and trails clubs in the state. Rodale Press, publisher of *Bicycling Magazine*, the world's largest consumer bicycling publication, and *Prevention Magazine*, which has a large walking club, is based in northeastern Pennsylvania. The bicycle industry is an important part of the Pennsylvania economy. Cannondale, a bicycle manufacturer with two plants in the state, exports to Japan, Europe, and the rest of the world.

The state has developed a Bicycle and Pedestrian Master Plan to take advantage of the opportunities and potential benefits that can be realized in the years ahead. The plan is based on a shared vision for the future of bicycling and walking that was expressed in community meetings throughout Pennsylvania.

Vision

"Pennsylvania is a place where residents and visitors of all ages can choose to bicycle and walk. People are able to bicycle and walk with confidence, safety and security in every community, both for daily transportation and to experience and enjoy the remarkable natural resources of the state."



Targets

The State has adopted the twin goals of the U.S. Department of Transportation's National Bicycling and Walking Study as a general guide to progress. The two goals are:

- to double the percentage of trips made by foot and bicycle.
 - to reduce the number of injuries and fatalities suffered by bicyclists and pedestrians by 10 percent.
- Achieving these goals is going to be much easier in some parts of the state than others. The plan has focused on five typical types of communities in Pennsylvania and set targets for each of them which, together, will help meet the statewide goals.

1. Large Cities

More than one in ten commuting trips are already made by foot or bicycle in cities such as Philadelphia and Pittsburgh. Three targets are:

- Half of all trips in the downtown areas of large cities should be made by foot or bicycle.
- Five percent of local journeys that are three miles or less, especially non-work trips, should be made by bicycle.
- The number of people bicycling and walking to transit stations and bus stops should double.

2. Small Cities and Towns

In smaller Pennsylvania cities such as Erie, Scranton, and Harrisburg, bicycling and walking are good options for short commuting trips and a wide range of shopping and social activities. Two targets are:

- Half of all trips in the downtown areas of small cities should be made by foot or bicycle.
- One in five commuting trips will be made by foot or bicycle.

3. Suburban Areas

The lowest levels of bicycling and walking are in the suburbs, where new developments have made little or no provision for bicyclists or pedestrians. The greatest potential to increase activity in these areas is by walking and bicycling to transit service instead of driving, as well as walking to local shops, services and recreation areas. Two targets are:

- The number of people bicycling and walking to transit stops should be doubled.
- Twenty percent of all non-work trips that are 3 miles or less should be made by foot or bicycle.

4. Rural Communities

Efforts to increase the use and safety of bicycling and walking in

rural communities are best focused on activities that make main streets of rural communities safer and more accessible for people on foot and bicycle and that promote bicycle tourism. One target is: Half of all Pennsylvanians will enjoy the natural resources of the state by bicycling (up from 39 percent in 1992), as will an increasing number of out-of-state visitors.

5. College Communities

Between one-fifth and one-half of all work related commuting trips in places such as State College, Lock Haven and Indiana are made by foot or bicycle, and there is still enormous potential to increase bicycling in these communities for other types of trips. One target is: Ten percent of all trips in college towns will be made by bicycle.

Current Conditions and Needs

In 1996, few Pennsylvania communities are bicycle-friendly or walkable. For the past 50 years, the transportation system has been developed with the automobile as the primary focus. Bicycling and walking have not traditionally been considered as the highway system has grown and as our communities have spread across the state.

Times are changing. We now recognize that bicycling and walking are practical and efficient transportation alternatives with a great potential for making communities more accessible, improving air quality and reducing traffic congestion.

In meetings across the state, and in responses to surveys and a toll-free phone service, Pennsylvanians described why the transportation system should change to meet the needs of bicyclists and pedestrians.

The public indicated five main areas of concern.

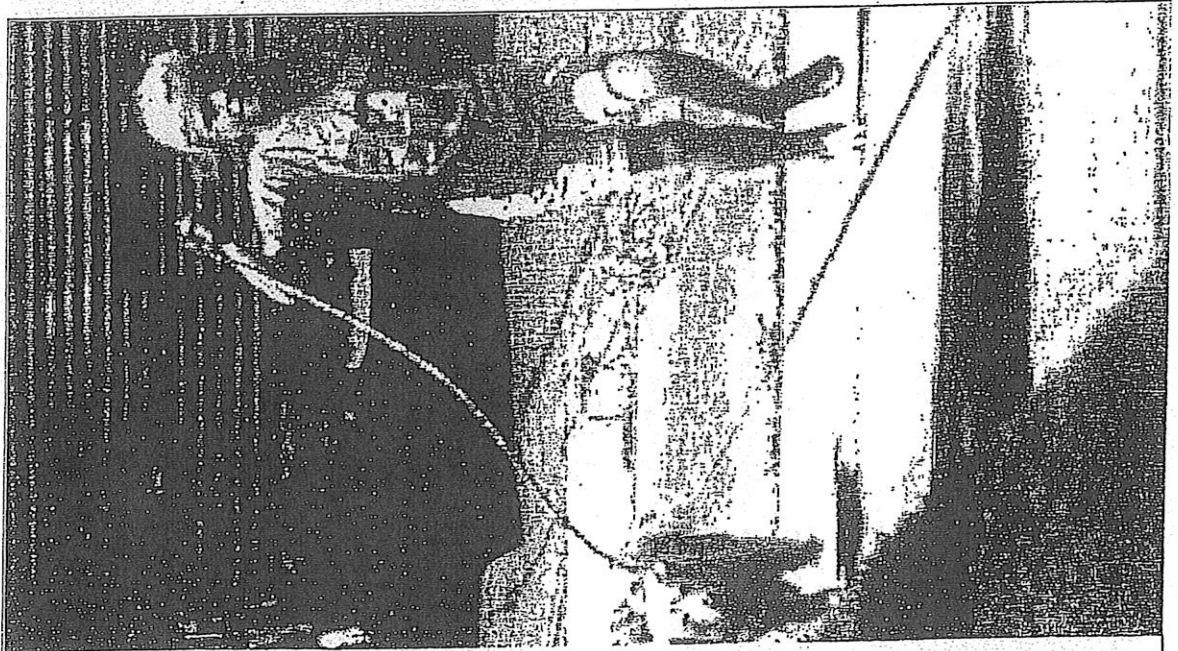
- Facilities.** More people would walk and bicycle more frequently if more state and local roads had paved shoulders, sidewalks, bike lanes and signed routes.
- Share the Road Mentality.** Education and enforcement programs are necessary to remind drivers, bicyclists and walkers of their rights and responsibilities on the road.

Transportation Policy. Bicycling and walking need to be considered as an integral part of the overall transportation system.

- Comprehensive Approach.** Shoulders, trails, sidewalks and bike lanes alone will not make Pennsylvania communities bicycle-friendly and walkable. The provision of bicycle parking, crosswalks, education, promotion and training are all necessary to make bicycling and walking safe, convenient and viable.

Government Leadership. In order to achieve substantial improvements in the mobility and safety of pedestrians and bicyclists, state and local governments must forge a partnership that provides both leadership and emphasis in the selection and implementation of system enhancements.





A New Contract

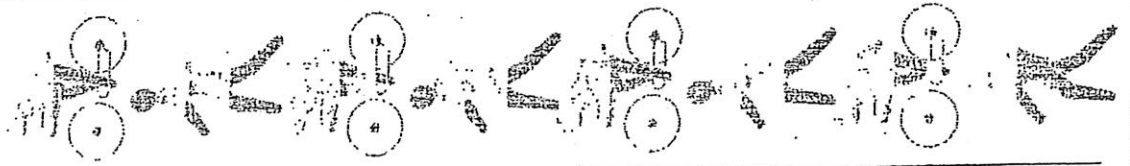
Addressing these concerns is going to involve every one of the 2,639 municipalities and 67 counties in the state, as well as the Department of Transportation, other state agencies and the regional and local agencies that coordinate transportation and land use planning throughout the state.

The Pennsylvania Department of Transportation is ideally placed to take the lead in forging a new contract between state and local agencies and between government and the bicycling and walking public. As the lead agency responsible for the overall implementation of the state plan, PennDOT can establish policies and procedures to routinely improve conditions for bicycling and walking as changes are made to the transportation system.

PennDOT has adopted five important policy goals:

1. **Modify the existing transportation infrastructure to encourage bicycling and walking in targeted rural, suburban and urban areas of the Commonwealth.**
2. **Plan, design, construct and maintain new and improved transportation facilities to accommodate and encourage appropriate use by bicyclists and pedestrians.**
3. **Provide technical assistance, training, and leadership to support local jurisdictions in improving conditions for bicycling and walking.**
4. **Implement educational and enforcement programs to reduce crashes involving bicyclists and pedestrians by at least 10 percent over the next 20 years and to provide a better sense of safety and security for bicyclists and pedestrians.**
5. **Promote acceptance and welcome bicyclists and pedestrians as users of the transportation system.**

Under each of the goal statements are a number of quite specific actions that will, over time, change the way the transportation system deals with bicyclists and pedestrians.



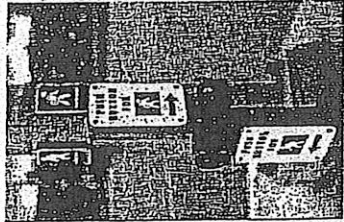


Goal 1. Modify the Existing System to Encourage Bicycling and Walking

- Investigate funding options to retrofit the existing system to make streets and highways safer and more convenient for bicyclists and pedestrians.
- Work cooperatively with regional and local transportation agencies to review opportunities to improve the safety and access of pedestrians and bicyclists on state highways in downtown areas; on major highways in urban areas; getting to transit services; in tourist areas of the state; on main streets in rural communities; and in college towns.

In particular, improvements to be considered should include:

- crosswalks and signals to get pedestrians safely and quickly across state routes
- bike lanes, wider outside lanes and alternative routes along major highway corridors
- secure bicycle parking at transit stations and park and ride lots
- paved shoulders on rural highways in tourist areas
- bike lanes and continuous sidewalks in the retail core of rural communities
- bike lanes and other facilities on state roads that provide access to colleges



Goal 2. New and Improved Facilities to Accommodate Bicyclists and Pedestrians

- Design new construction projects with the intent that they will be used by bicyclists and pedestrians and that they will share the roadway with motorists.
- Establish an internal Task Force to review PennDOT's policy on sidewalks, lighting and signals for pedestrians.
- Develop a set of bicycle and pedestrian facility guidelines to ensure that consistent designs are used throughout the state.
- Identify key bicycle and pedestrian corridors where sidewalks, bike lanes, paved shoulders, trails and signed bike routes can be provided as part of PennDOT projects.
- Encourage city and county governments to provide sidewalks in new projects.
- Make new intermodal transportation facilities accessible to bicyclists and pedestrians.

Goal 3. Technical Assistance to Other Agencies

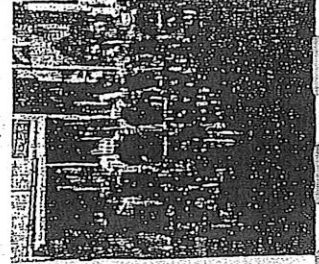
- Demonstrate leadership by producing state-of-the-practice guidance documents, model programs and training for transportation planners and engineers throughout the state.
- Distribute design and planning guidelines for bicycle and pedestrian facilities to all levels of government, and provide training courses to complement these guidelines.
- Develop and/or disseminate model land use and planning ordinances that encourage bicycling and walking.
- Establish an internal Bicycle/Pedestrian Steering Committee to coordinate activities between all levels of PennDOT and other state agencies.

Goal 4. Education and Enforcement Programs to Reduce Crashes

- Establish a special Task Force on bicycle and pedestrian education and enforcement with a mission of:
 - Determining the responsibilities of various agencies and identifying funding sources.
 - Ensuring adult and child safety materials and curricula used in the state are consistent and address the primary causes of bicycle and pedestrian crashes.
 - Assessing the attitude of motorists toward bicyclists and pedestrians and reviewing their knowledge of relevant traffic laws.
 - Reviewing all driver training materials to ensure adequate coverage of bicycle and pedestrian safety issues.

Goal 5. Promoting Bicycling and Walking

- Increase the use of information about sharing the road among motorists, bicyclists and pedestrians in state publications, official speeches, etc.
- Review and examine the state vehicle code with respect to on-going needs and current national norms.
- Become a model employer for bicyclists and pedestrians by establishing a cooperative commuting program to encourage employees to ride and walk to work.





Conclusion

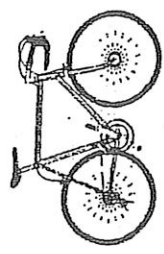
The future of bicycling and walking in Pennsylvania is at a crossroads. There is a tremendous potential to boost levels of both daily and recreational travel by foot and bicycle. The potential will not be realized without a serious commitment to change.

This new Plan updates the 1976 state bicycle plan and establishes a new contract between the bicycling and walking public and the agencies that serve them.

It is imperative that the Department, MPOs, LDDs, and local people (bicyclists and pedestrians) work together in the planning process to ensure that the facilities that are built serve the needs of the community.

There is a general desire in communities to make bicycling and walking more accessible and attractive options. After all, the state is home to major national bicycling and walking publications and manufacturers and has some of the best riding country in the nation.

There is tremendous potential to increase the safety and use of bicycling and walking in Pennsylvania. An institutional framework to provide leadership and coordination is starting to emerge. There is an opportunity now to seize the initiative and set in motion an ambitious action plan to make the Commonwealth of Pennsylvania a place where residents and visitors of all ages WILL choose to bicycle and walk.





APPENDIX IX

York County Growth Boundary



Chapter IV

Future Land Use Plan -

Managing Growth in York County

Countywide Vision

York County's many and varied assets have collectively resulted in a Quality of Life for its citizens that is exemplary. The unprecedented growth of the second half of the Twentieth Century will result by the year 2000 in a doubling of the County's population. Unfortunately, much of this growth has occurred without a commitment to any clear vision of where the County is going, or more importantly where its citizens want it to go. Consequently, from many quarters concerns are being expressed that our quality of life is increasingly being placed in harm's way.

In its simplest form, that which makes York County attractive is its lack of monotony, its varied landscapes, and the current limits on the mass of development. York County has woodlands, wetlands, unique natural areas, productive agricultural lands, and a mix of residential, commercial, and industrial lands in both urban and suburban settings. The picture is completed with a number of as yet unspoiled rural villages. It is this physical setting which provides the foundation for York County's well known work ethic, family values, entrepreneurial spirit, and sense of community. This is what must be saved and passed on to future generations.

The development pattern of York County must maintain, and if possible, reinforce the separateness of the growth areas in the County. The bulk of the County's future growth should be directed into these areas in a carefully phased manner. In the intervening locations between the growth areas, the pattern of rural/agricultural landscape should be retained, and intensive growth discouraged. As development is channeled into growth areas, a full range of public services and infrastructure can be provided in an efficient and cost-effective manner. An emphasis should also be directed toward providing affordable housing countywide, with a range of housing choices provided in all growth areas.

The "Vision for the Future" is really a reflection of the past. The historic pattern of development, with York City as the hub, surrounded by smaller urban areas, rural villages, and an agricultural hinterland to a certain extent still exists today. However, there is clearly a need to coordinate the myriad of planning efforts taking place today, and begin to change the current developmental trend toward sprawl and loss of agricultural lands. A return to a more balanced separation between urban and rural areas is essential in order to preserve the diversity that makes York County special.

Land Use Plan Concept

The overall concept of the Land Use Plan reflects a desire to channel and contain development within appropriate growth areas, which are areas capable of providing a range of necessary services and infrastructure. Since agricultural and rural residential lands will continue to comprise the majority of

land use within the County, a more concentrated development pattern will need to be coupled with effective tools to limit the loss of important agricultural resources.

Fortunately, York County lends itself to a "naturally-defined" land use plan. Physical limitations such as drainage basins, mountain ridges, steep slopes, and poor soils have to a large extent directed and determined the existing land use pattern. Similarly, individual municipal comprehensive plans and zoning ordinances as originally conceived, and looked at collectively, portray a relatively cohesive and logical pattern of land use, again based principally on physical limitations.

However, land use trends of the past 10 - 20 years evidence a pattern of sprawl that doesn't reflect the original intent or design of the plans and ordinances. The cumulative impact of many rezonings, which tend to undermine the goals and objectives of municipal land use planning efforts, as well as the lack of clearly defined differences between agricultural/open space zones and developmental zones has led to a pattern of use that has blurred the diversity provided by traditional urban/rural distinctions.

Therefore, the Land Use Plan is built upon the following principles:

1. Recognition of the "natural" land use plan provided by the physical determinants of the County.
2. Delineation of preliminary growth areas based principally on existing zoning classifications.
3. Recognition of the need for a tightening of restrictions in many open space and agricultural areas. For example, large lot single family dwellings as permitted uses in these areas do not preserve open space, but rather encourage a "peppering" of development throughout the rural landscape, and an inefficient and costly provision of services and utilities.
4. Recognition of the need for intermunicipal cooperation to ensure that individual municipal planning efforts fulfill not only local goals and objectives, but also work towards meeting common regional and countywide land use needs.

Growth Areas

The Land Use Plan proposes directing a large percentage of projected growth into five Primary Growth Areas and five Secondary Growth Areas, as delineated with "preliminary growth boundaries" on Map 6. The purpose of growth areas is to establish "boundaries" which separate areas which are appropriate for more urbanized uses and the extension of services and utilities, from areas intended for rural and resource uses.

Growth areas typically include lands appropriate for future urban and suburban development requiring a full range of public services and facilities such as public sewer and water, police, fire, and schools, and would include residential, industrial, commercial, institutional, and recreational uses. A concentrated pattern of development within growth areas is not meant to imply high density, but

rather a full range of land uses and services. The reason for the distinction between primary and secondary growth areas is the recognition that not all areas will contain the full range of services that would be necessary for a fully self-contained community.

Benefits of Growth Area Boundaries

The establishment of growth area boundaries throughout York County provides a logical basis for land use decision making, and will be of benefit not only to the County as a whole, but also to municipal planning efforts. The benefits of growth area designation can be summarized as follows:

1. *Existing Communities* - Existing communities will benefit through the redirecting of growth to established areas, and by encouraging re-investment and redevelopment. By limiting the outward expansion of growth through definition of a boundary, there will be less likelihood of communities eventually merging together with the resultant loss of community character and identity.
2. *Community Facilities and Services* - Provision of community facilities and services such as roads, water and sewer lines, schools, fire stations, and police protection will become more cost-efficient, and service costs and property taxes will be minimized. Capital improvements planning will be facilitated due to a more reliable picture of where future development will take place.
3. *Transportation* - Overall coordination of transportation planning and budgeting will be enhanced by a more concentrated pattern of development. The number and length of trips needed to reach destinations will be reduced, and mass transit planning will become more efficient through the provision of a more concentrated pattern of origins and destinations. Reduction in automobile dependence and gasoline consumption will also result in energy conservation benefits.
4. *Housing* - Decreased public service costs will reduce housing prices through lower land costs and development fees. Providing a variety of housing types at a variety of densities will promote affordable housing opportunities.
5. *Agriculture* - Establishment of growth areas will minimize leap-frog development into agricultural areas, reducing the loss of farmland, and minimizing the intrusion of non-farm uses into farming areas. The value of agricultural lands will stabilize, based on farmland rather than potential development prices, and farmers, encouraged by a greater likelihood of long term agricultural viability, will be less reluctant to reinvest in the farming operation.
6. *Natural Resources* - Directing development to appropriate lands within growth areas will lessen the threat of destruction or alteration of important natural resource lands. A more compact pattern of development will help to protect resources such as floodplains, wetlands, wildlife habitats, prime soils, and steep slope areas.

7. *The Economy* - Sufficient lands will be allocated in growth areas to meet projected commercial and industrial needs, and to provide locations with the necessary infrastructure available. The farming community will also benefit through an improved stability in farmland areas and less intrusion of urbanized uses.
8. *Cooperative Planning* - The ability to plan on a regional and county basis will be improved. The existence of established regional growth areas will make municipal decision making simpler, more consistent, and more predictable. Coordination of planning with adjacent municipalities will be enhanced by the joint acceptance of growth area boundaries, and consistency between County and municipal plans will provide additional support to municipal planning efforts, as well as potential priority in State funding decisions. Regional efforts will provide the opportunity to identify and reduce the number of zoning inconsistencies between neighboring municipalities, and lead to more uniformity of development controls throughout the growth area.

Growth Area Delineations

The ten growth areas indicated on Map 6 are delineated with *preliminary* growth area boundaries. The final path or location of boundary lines will be determined jointly with municipalities through the "Municipal Consulting Program" discussed in Chapter V of this Report. Through a series of meetings in individual municipalities, the lands most appropriate for inclusion within growth areas will be discussed and finalized. The final size of growth areas will be based on population projections, potential availability of public facilities and services, regional land use needs, a sufficient supply of developable land for the twenty year planning period, and the need for protection of important resource areas.

Factors considered in the delineation of the *preliminary* growth area boundaries included:

1. Existing developed areas;
2. Existing public water and sewer service areas;
3. Existing municipal zoning delineations;
4. Natural features such as watershed protection areas, steep slopes, floodplains, and wetland areas; and
5. Farms preserved with agricultural conservation easements.

The *preliminary* lines are presented as a starting point for discussion. The lines are subject to change as the consulting program proceeds, and as direct municipal input provides the necessary local knowledge and expertise. The final growth area delineations, as well as the joint delineation of protection and resource areas, will produce a County Land Use Plan which is tailored to local needs and which meets regional and County goals and objectives.