

Harriet Wetherill Park

Master Plan Report



Plymouth Township
Montgomery County, PA
February 2007

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Harriet Wetherill Park

Master Plan

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Executive Summary

Introduction

Harriet Wetherill Park is an important cultural heritage landscape located in Plymouth Township, Montgomery County, Pennsylvania. The site consists of a 51.818 acre existing park parcel, most of which was acquired by Plymouth Township in 1996. The second parcel is the life estate, a single 14.763 acre tract previously owned by Mr. and Mrs. Elkins Wetherill and acquired by Plymouth Township in July 2006. The intent of acquiring the parcels of land was to permanently protect a significant area of open space in Plymouth Township and to preserve the site's natural resources. Together the parcels comprise 66.581 acres of picturesque agrarian landscape, in the midst of expansive suburban development.

The Plymouth Township Parks and Recreation Department initiated this planning project to develop a Master Plan to address the conservation of the site and to create a vision for Harriet Wetherill Park.

Harriet Wetherill Park Vision

Harriet Wetherill Park is a model of conservation and public recreation for people who live, work, and visit in Plymouth Township.

The recommendations, mission and goals contained in the Master Plan Report are the result of an extensive public participation process and may continue to evolve as Plymouth Township works toward its implementation. These include:

- Protect and preserve the site's natural, cultural and agricultural heritage.
- Promote environmental education for students and residents of Plymouth Township.
- Explore the dominant themes of farming, native grasses and trails.

Harriet Wetherill Park Mission

Plymouth Township will plan, design, develop, program, and maintain Harriet Wetherill Park with the spirit and resources necessary to conserve the priceless legacy of the natural and culturally significant property as a public park.

The Planning Process

Plymouth Township retained Yost Strodoski Mears (lead consultant), Toole Recreation Planning, and RETTEW Associates to develop the master plan. With expertise in landscape architecture, park design, recreation planning, ecology, environmental education, and public participation, the planning team undertook a year-long study of the park, visitors, management, operation, programs, and services.

The planning process was rooted in extensive public involvement in the form of a lead study committee, key person interviews, public meetings, community opinion survey, and peer consultants. Comprehensive field investigation, inventory and analysis were completed to gain an understanding of the site's natural resources and an assessment of the built facilities. Representatives of the Association of Nature Center Administrators (ANCA) came to the site for a consultation with staff and interested parties as to the feasibility of a future nature center.

The planning process considered existing and potential park visitors; site characteristics; adjacent and nearby land uses; environmental education goals; leisure needs and trends; and the desires and concerns of the community. Based on the findings, the planning team developed alternative designs with different approaches to site goals and potential improvements. Following reviews of alternative designs, a Final Master Plan for Harriet Wetherill Park was developed with detailed proposals for improvements to the park sites, suggested phase implementation, resource protection, the introduction of environmental education amenities and a full cost analysis. With the recognition that park operations are the most significant lifetime cost of a park, the study also explored potential park programs, staffing, maintenance management, park financing, partnerships, and alternative funding sources.

Harriet Wetherill Park Resources

Harriet Wetherill Park offers diverse landscapes including natural areas, agricultural fields, historic homestead and equestrian facilities. Situated north of the Pennsylvania Turnpike Norristown Exit, the site is surrounded by single-family residential homes. The existing park is primarily agricultural land farmed by Maple Acres Farm in agreement with the Township. There are earthen trails throughout, grass meadows, and wooded hedgerows. The Wetherill homestead property is characterized by multiple equestrian pastures, which are divided by wooden post and rail fences.

An inventory of Harriet Wetherill Park's natural and man-made resources was taken to identify and evaluate them against needs for the future. The map on Page 3-7 locates grasses, wildflowers and other important species as identified by Mr. Wetherill. Five major resources were found to characterize Harriet Wetherill Park: water, land, transportation routes and access, area utilities, and structures.

The Water -

The park includes several water resources. One wetland totaling 0.231-acres is outlined in the Wetland Delineation Report. Park improvements should not infringe upon or conflict with this area. Four watercourses exist on the park site. All were determined to be Plymouth Creek and its related tributaries. Plymouth Creek flows southwest through the site and Township, continuing through Conshohocken Borough where it outlets into the Schuylkill River.

The Land -	<p>The park includes a variety of landscapes: open fields and meadows, pasture fields, woodlands, and edges. From a vegetative standpoint, Harriet Wetherill Park has an unparalleled resource of native grasses and their representative communities and habitats as well as important riparian corridor vegetation. As with most park sites, however, the threat of invasive species is a constant concern and resource management issue. The park site offers diverse landscapes for various species of mammals and birds commonly found throughout eastern Pennsylvania. The site is well suited for bird watching and attracts hawks and many passerine and migratory species.</p>
Transportation Routes and Access -	<p>Main access roadways of the site are Narcissa Road and Butler Pike. The park is close to the designated route of the proposed Montgomery County Cross County Trail connecting to the Schuylkill River Trail. Connection to this trail would provide a regional, off-road link for park visitors. Two vehicular bridges and one pedestrian bridge exist in the park over Plymouth Creek and its tributaries. A structural assessment should be completed and the bridges replaced as necessary to accommodate the uses proposed within this master plan.</p>
Utilities -	<p>Public utilities are sporadically available in the area of Harriet Wetherill Park including public sewer and electric service. Currently an on-lot septic system provides sewer disposal for the Wetherill homestead site and a well provides water.</p>
Structures -	<p>The primary structures on the park site are buildings associated with the Wetherill homestead. The main home is complemented with a carriage house, barns, sheds and other structures associated with the family's interest in and love of horses. Architects George J. Donovan & Associates conducted a Building Assessment of the existing structures located in Harriet Wetherill Park. The Assessment review is included in the Appendix of the Master Plan Report.</p>

The Plan

The Harriet Wetherill Park Master Plan promotes a future that respects and protects the natural environment, offers passive recreation opportunities, and introduces the potential for environmental education.

The plan provides a blueprint for the park that can be implemented in various phases over time. The plan creates a vision for Plymouth Township that is both evocative of the past and the springboard for a new direction in parks and recreation: the natural world around us.

Proposed Park Features

The design of Harriet Wetherill Park highlights the agricultural heritage of the site and emphasizes preservation and stewardship of the site's natural resources. The Master Plan recommends the following improvements and features:

Wetherill Residence, and

Associated Buildings - The main house will be retained in the park setting and could have a variety of uses such as a caretaker home, intern housing, parks personnel offices, or public meeting area for the park. There are several accessory buildings located throughout the complex. The master plan dictates the removal of the caretaker house, two run-in sheds, and the open three-sided shed in the final phase of development.

Nature Center - The area of the existing indoor riding barn is proposed as the location for the nature center building. It was hoped that the current structure could be adaptively re-used, but the architectural assessment later indicated that the barn is near the end of its useful life. The new building and surrounding grounds will accommodate visitors and provide opportunities for learning. Additional satellite areas will serve as outdoor classrooms and bring park visitors close to nature.

Natural Areas - A variety of natural settings are preserved and enhanced throughout the park. Woodlands, meadows, and wetlands are important habitats that sustain wildlife. In addition to the variety of natural landscapes found on site, an exhibit Home Garden and Pennsylvania Grass Meadow will be implemented. Natural areas provide a quiet setting for resting and enjoying the plantings and wildlife they attract and a landscape for learning.

Picnic Area - A picnic area is proposed at the entrance from Narcissa Road. The pavilion will provide picnic space and shelter from foul weather for outdoor programs and events.

Trails - There are three miles of trails proposed for Harriet Wetherill Park. A multipurpose hard-surface trail will be available for walking, running, baby strollers, and people in

wheelchairs. Earthen trails will be available for equestrians and hiking. Bicycle use is not anticipated.

Support Facilities -

To accommodate park visitors, restrooms will be built in key areas of the park. Water fountains, seating areas, and information kiosks will be developed for visitor support. Benches and trash receptacles will be available in gathering spots in the park and along trails.

Public Access -

Three entrances are proposed for Harriet Wetherill Park. Improvements are planned for a comprehensive wayfinding and signage system, parking and drop-off areas and better circulation within the park.

Landscaping -

Buffering and naturalization landscaping is proposed for the site's perimeters to enhance the park's natural setting and wildlife habitats. Use of native plant vegetation will be emphasized. The use of native wild flowers and warm season grasses is recommended throughout the park as well to provide visual interest, provide cover and food for wildlife, and lower the ongoing maintenance cost of mowing.

Park Architecture -

In addition to the residence and the associated buildings, several new structures are proposed for the park. Structures should be built with a common vocabulary of unified materials to complement the farmhouse. Colors, materials, and forms should enhance and blend with the natural setting and promote innovative "green" building initiatives.

Stormwater Management -

Stormwater facilities will be required to accommodate the stormwater runoff from park improvements. Best Management Practice principles and innovative "green" solutions that promote infiltration and reduce site disturbance should be prioritized.

Sustainability and Green Design -

The development of a park site provides an opportunity to incorporate green design techniques and features. Integration of green design principals and products for construction and rehabilitation of park sites is encouraged to minimize the impact on natural resources, promote sustainable development, and provide demonstration elements that further public education regarding sustainability and green initiatives.

Cost and Implementation Analysis

Harriet Wetherill Park's recreation and environmental educational opportunities will require the investment of significant capital and the dedication of Township staff to realize the vision established in this master plan. The park's development will occur in phases over several years based on the master plan. Three stages of implementation and associated costs are described in the following:

Early Implementation

Stage -

This stage of development includes four specific tasks that respond to the planned expansion of public use at the Harriet Wetherill Park site:

- Identify the property limits with property line boundary markers and signs.
- Remove invasive non-native species.
- Implement a buffering and naturalization plan.
- Install an entry sign at the Narcissa Road entrance and an information kiosk along the trail.

Also included are the professional fees for the design and engineering of the Initial Public Use Stage improvements.

Initial Public Use Stage -

The Initial Public Use Stage includes the first two phases of developing Harriet Wetherill Park. The improvements in Phases 1 and 2 will provide amenities for visitor use and provide a trail system throughout a large portion of the park.

Capital Investment Stage -

The major investment in the property occurs in the Capital Investment Stage, which includes Phases 3 and 4. Phase 3 includes the development of the nature center building and Phase 4 is the renovation and introduction of amenities to the homestead area.

Implementation Strategies

Dividing the project into the suggested stages will allow a varied implementation strategy for each stage. While municipal work forces may be able to complete the tasks defined in the Early Implementation Stage, the Initial Public Use and Capital Investment Stages will require detailed design and engineering construction documents for public bidding. Grants will be sought for the Initial Public Use and Capital Investment Stage, and a capital fundraising campaign for these major investments may be undertaken.

Early Implementation Stage

Buffering and Naturalization Plan..... \$221,382

Initial Public Use Stage

Phase 1..... \$228,907

Phase 2..... \$402,512

Sub-total Initial Public Use Stage..... \$631,419

Capital Investment Stage

Phase 3..... \$4,162,761

Phase 4..... \$863,338

Sub-total Capital Investment Stage ... \$5,026,099

Total \$5,878,900

The improvements will be phased in over a long period of time as financial and human resources permit. Construction of Harriet Wetherill Park as depicted on the final master plan will require numerous approvals and permits such as environmental permits, erosion and stormwater submissions and land development approval. The Harriet Wetherill Park Master Plan is located on the last page of Chapter 5, and depicts the park with all proposed improvements. The Phasing Plan is at the end of Chapter 6.

Operations, Budget and Management

The operations and maintenance plan sets forth a strategy for managing Harriet Wetherill Park as it is developed over the next ten years and beyond. Work sessions with the Parks and Recreation Department management team, township officials, and citizen participation through the Study Committee contributed to the formulation of the core values and guiding principles for the Harriet Wetherill Park management plan. The following statements comprise the guiding principles:

- Honor the Wetherill property through effective management
- Conserve the cultural heritage landscape as a significant asset using best management practices.
- Manage the park to conserve its resources and provide responsible public use.
- Leverage Township resources with other resources to operate and maintain the park.
- Phase park improvements in over time.
- Build partnerships and harness community resources to develop and operate the park.
- Finance park development and operation through a mix of tax and non-tax dollars.

How Harriet Wetherill Park Will Be Operated

Harriet Wetherill Park is Plymouth Township's only nature park and will require an operation strategy that differs from that for the active recreation parks. Plymouth Township will operate Harriet Wetherill Park as follows:

1. The Public will have free access to the park.
2. The Township will charge user fees for specific activities or services as they benefit individual participants.
3. The Township will charge fees for rental or lease of special park facilities.
4. The Township will create partnerships with other community organizations for programs, services and projects that will enhance the conservation of natural resources for the park.
5. Park development and programs will be phased in over time as resources and partnerships permit.
6. The Township will create the position of an Environmental Resources Specialist.
7. Volunteerism will be extensive in Harriet Wetherill Park.
8. The Township will develop policies on the use of the park by other groups based on the guiding principles and vision of Harriet Wetherill Park.

Park Programming

Harriet Wetherill Park programming can be accomplished through modes with different levels of service and resources required: Mode I - Promotion and Awareness; Mode II - Small Scale Programs; Mode III - Full Scale Programs; Mode IV - Nature Center. The program modes and the outcomes in terms of programs and facilities depend on the resources allocated.

The goal of park maintenance for Harriet Wetherill Park is to provide a safe, clean, and attractive appearance for the conservation of natural and cultural resources as well as the healthful and enjoyable use by the community through implementation of an efficient and effective management program.

Park Maintenance

Maintenance standards set forth the level of care that park and recreation facilities should receive. The majority of Harriet Wetherill Park will consist of natural areas that are not developed and require the lowest level of maintenance and care. Moderate to high-level maintenance will be required for the high traffic and immediate grounds of the facilities in the park.

Budgeting

Maintenance budget projections should be made based upon local experience; national standards; and costs for labor, materials, and equipment. There is no formalized tracking of workload or costs for park maintenance in Plymouth Township at present. That is one of the reasons a Peer-to-Peer project is being undertaken with Pennsylvania's Department of Conservation and Natural Resources. Plymouth Township is currently spending about \$4,400 per acre for park maintenance. However, Harriet Wetherill Park is a different kind of park and several factors will mitigate park maintenance costs.

1. It is likely that the maintenance tasks to be performed can be absorbed within the existing park maintenance staff time and budget until the end of the Initial Public Use Stage.
2. It is a natural resource park without the requirements of active recreation areas that need intensive maintenance and a manicured appearance.
3. Policies such as "Pack it in - Pack it out" for litter will result in considerable cost savings through the elimination of staff time and effort.
4. The investment in the salary and benefits of the Environmental Resources Specialist will greatly reduce costs and enhance park care through the development of a full-scale volunteer program.
5. The development of the Park Maintenance Management system will provide a system for workload cost tracking.
6. The establishment of a trust fund could help to generate proceeds to support park operations.

Revenue

Parks with nature centers are usually funded by a combination of tax and non-tax revenues. They tend to generate most of their operating costs through fees from school programs, public programs, special events and memberships. Four broad categories cover revenue generation for parks and recreation:

- Compulsory Resources
- Fees and Charges
- Rentals, Licenses and Permits
- Grants, Gifts and Bequests

Capital Development Costs

The total development cost of Harriet Wetherill Park will be \$5.88 million spread over five stages and many years of phased implementation. Plymouth Township intends to use a combination of funding sources to pay for park development. These include:

- Plymouth Township Park Recreation Impact Fees.

- Government grants from Pennsylvania Department of Conservation and Natural Resources and Department of Community and Economic Development.
- Grants from the private sector such as Comcast, PECO, REI, Pew Foundation, William Penn Foundation, and others to be determined.
- Partnership projects with community organizations for development of special park features such as the bird blinds, nature center components, park furnishings, etc.
- Environmental partnerships with organizations such as the Audubon Society and Montgomery County Parks and Heritage Services.
- Community service initiatives such as scout projects, community clubs, and justice system labor.

Recommendations

- A. Develop the construction drawings, plans and specifications for Harriet Wetherill Park as recommended for the phases.
- B. Coordinate maintenance management planning with the Peer-to-Peer project dealing with the development of a formalized maintenance management system.
- C. Secure the perimeter of the park and buffer the neighboring properties to establish the park as a good neighbor.
- D. Inform neighboring property owners of any encroachments they have made on park property to have them removed immediately.
- E. Appropriate an operations and management budget for Harriet Wetherill Park.
- F. Develop a promotional program to inform citizens about Harriet Wetherill Park, its beauty and serenity for drop-in use for walking, nature observation, relaxation, and bonding with family and friends.
- G. Recruit and hire the Environmental Resources Specialist in 2007.
- H. Continue to manage the Parks and Recreation Department based upon a philosophy of teamwork.
- I. Phase in the program modes based upon the resources available.
- J. Once the Environmental Resources Specialist is on board, decide when to launch a Friends of Harriet Wetherill Park organization. Obtain 501-c-3 status under the IRS for this organization.
- K. Develop an annual work program with goals and objectives for Harriet Wetherill Park in terms of resource conservation and visitor services.

- L. Be rigorous in visitor evaluations. Evaluate every program, Seek visitor input on site. Hold focus groups with park visitors as well as non-users.
- M. Provide solid information to elected and appointed officials about Harriet Wetherill Park regarding visitation, program, maintenance, partnerships, revenues, and expenditures.
- N. Develop a long-term financing plan to fund the capital development of the park.
- O. For any major improvement, develop the Program or Maintenance Impact Statement recommended in **Plymouth... Naturally!** to insure the resources will be in place to maintain/support the improvement or program.



Chapter 1

Planning the Park

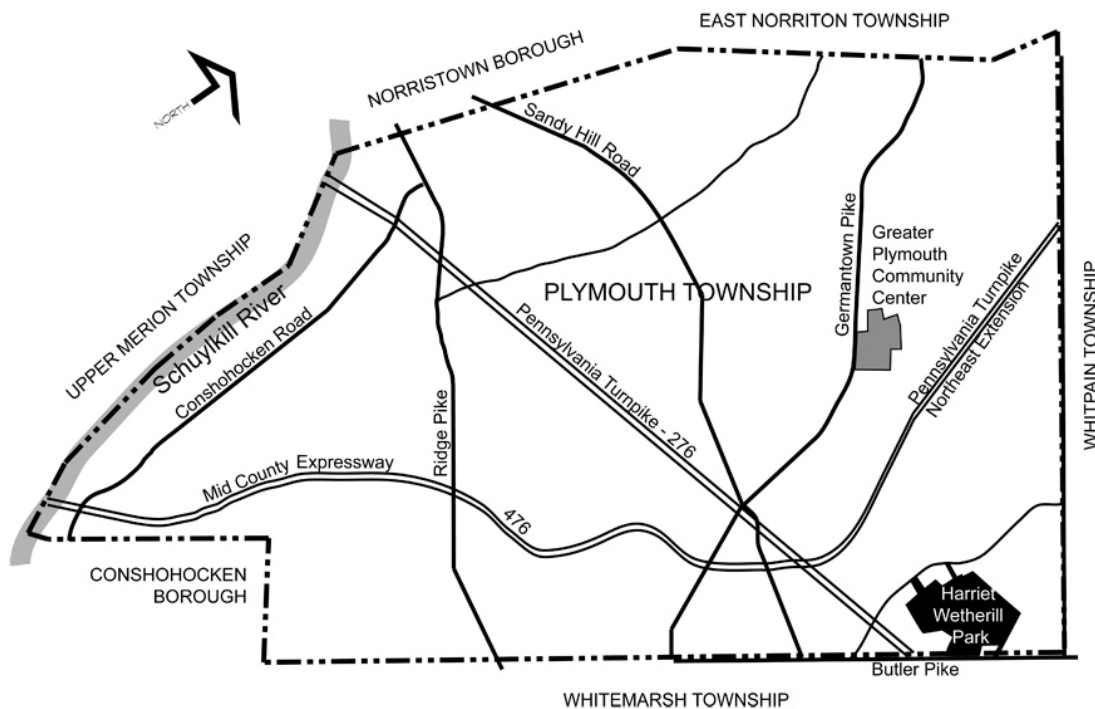
Introduction

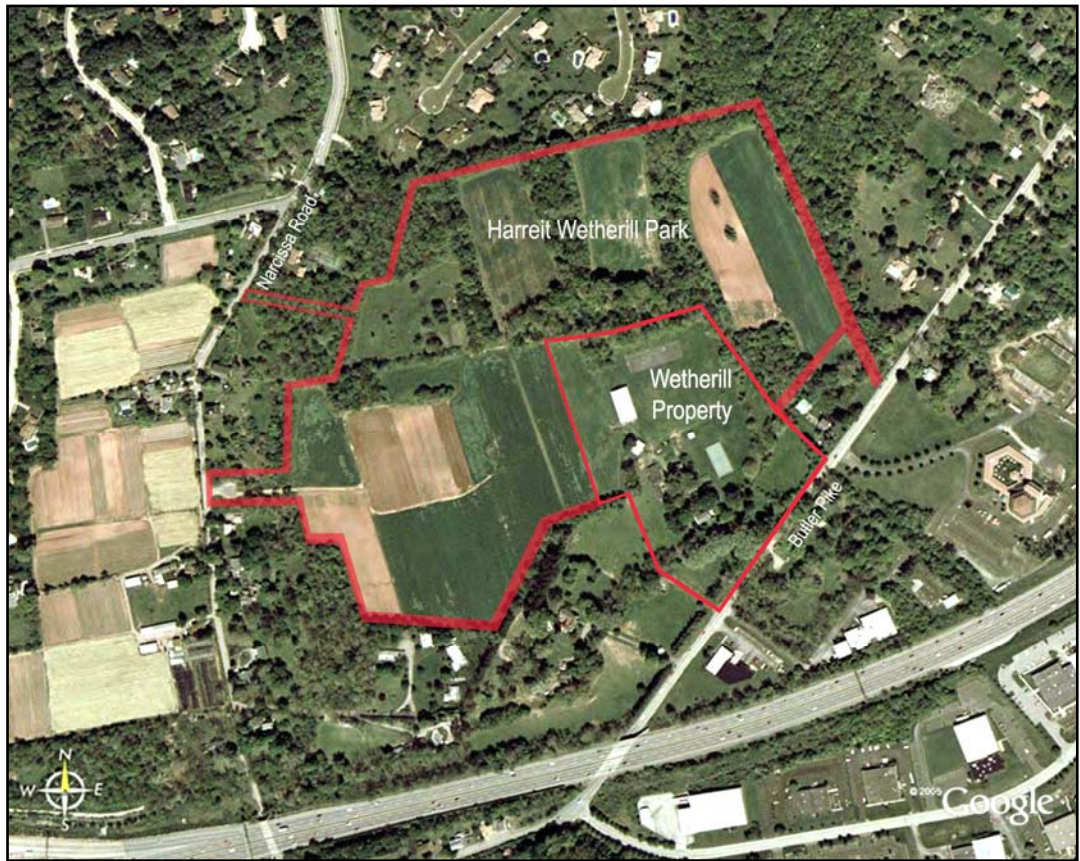
Harriet Wetherill Park is an important cultural heritage landscape located in Plymouth Township, Montgomery County, Pennsylvania. The northern portion of the site is the existing 51.818 acre Harriet Wetherill Park acquired by Plymouth Township in 1996 as permanently protected open space purchased in two tracts: the Larkin Tract of 11.511 acres and the Wetherill Tract of 40.307 acres, through the Montgomery County's first Open Space Grant Program.

Harriet Wetherill Park is largely agricultural lands farmed by local Maple Acres Farm in agreement with the Township. The southern half of the site is the life estate, a single 14.763 acre tract previously owned by Mr. and Mrs. Elkins Wetherill. It was recently acquired by Plymouth Township in July 2006 and is surrounded by large single family residences to the east, west, and across Butler Pike to the south.

Together the two parcels comprise 66.581 acres of picturesque landscape. The intent of acquiring the parcels of land was to permanently protect a significant area of open space in Plymouth Township and to preserve the site's natural resources. The combination of fields and forest is unusual in this highly developed section of Montgomery County. At times you feel you are many miles from urban life; nevertheless there is ample evidence on the site of people taking walks along the perimeter and enjoying this natural area.

The map below locates Harriet Wetherill Park within the region and an aerial photograph on the following page shows the area immediately surrounding the park site.





The Plymouth Township Parks and Recreation Department initiated this planning project to develop a Master Plan to address the conservation of the site and to create a vision for Harriet Wetherill Park.

The planning process considered existing and potential park visitors; site characteristics; adjacent and nearby land uses; environmental education goals; leisure needs and trends; and the desires and concerns of the community. A study committee, key stakeholders, staff, and citizens helped to develop this master plan that will meet community needs while respecting and preserving the site's natural features.

Montgomery County

Montgomery County is located in southeastern Pennsylvania, northwest of the City of Philadelphia, northeast of Chester and Delaware Counties, south of Berks and Lehigh Counties, and west of Bucks County. Montgomery County is the third largest County in the Commonwealth of Pennsylvania with a 2000 U.S. Census population of over 750,000.

The County's history is rich and varied with nationally significant historical sites such as Valley Forge National Park and the James J. Audubon Historical Site among many others.

The County's heritage was originally agricultural based but over the past centuries the character of the County has transitioned to a mix of industrial, business, and suburban residential with the more densely populated areas in closest proximity to Philadelphia including Plymouth Township.

Plymouth Township

Plymouth Township is classified as a home rule Township in the Commonwealth of Pennsylvania and one of the oldest Townships in Montgomery County

The Township is highly urbanized with a diverse community. There are executive and office campus's, a golf course, 11 parks, a variety of business and industrial parks, and two major shopping centers that attract citizen's from surrounding communities and other areas of the State.

Citizens of Plymouth Township

The population is 16,045 with growth projected at less than 1,000 through 2030. An educated, relatively affluent community characterizes Plymouth Township. Demographic trends feature an active aging population, increasing cultural and ethnic diversification and a strong family base. Planning for people of all ages is an important goal of Plymouth Township. Nearby municipalities of East Norriton, Whitpain, and Whitemarsh Townships and Norristown Borough have a combined 2000 population of over 79,000. A full report on the Township's population is in **Plymouth...Naturally!**

Plymouth Township Parks and Recreation Department

The Plymouth Township Department of Parks and Recreation has the Greater Plymouth Community Center and 11 parks comprising approximately 149 acres. Parkland includes 71 acres for active recreation and 78 acres for passive recreation. The Department strives to conserve, manage, and enhance the Township's natural and cultural resources. The Department offers over 2,000 recreation programs annually.

Harriet Wetherill Park Master Planning Process

The Harriet Wetherill Park planning process included five parts:

1. Inventory and Assessment
2. Public Participation
3. Development of Conceptual Alternatives and Pre-Final Master Plan
4. Final Master Plan
5. Operations, Budget and Management

1. Inventory and Assessment

The analysis of the sites natural resources and existing features guided the development of the master plan. Ecologists, landscape architects, recreation planner, and an architect and traffic engineer visited the park throughout the planning process to evaluate the site characteristics and facilities, observe site opportunities, and understand the impact on the surrounding land uses. Chapter 3 – Resources of Harriet Wetherill Park documents the findings of the inventory and assessment phase of the planning process.

2. Public Participation

To assure that the design for the park is community based, broad citizen input was critical to the planning process. Citizen input was gathered from four sources: a study committee, key person interviews, public meetings, and survey findings from the recently adopted **Plymouth ... Naturally!**, the Plymouth Township Park, Recreation & Open Space Plan.

3. Development of Conceptual Alternative Designs

Three conceptual alternative designs for the Harriet Wetherill Park were developed. The alternatives presented approaches to site goals and potential improvements. Following review of the alternative designs, a Pre-Final Master Plan for Harriet Wetherill Park was developed.

4. Final Design

The final design involved the preparation of detailed proposals for improvements to the park sites, resource protection, and introduction of environmental education amenities. Detailed cost estimates were also completed in this phase of work.

5. Operations, Budget and Management

Park operations are the most significant lifetime cost of a park. This plan includes recommendations for programs, staffing, and maintenance management. Park financing was explored with an emphasis on partnerships and alternative funding sources.

Conclusion

Harriet Wetherill Park is an oasis in the midst of expansive suburban development and retains a diverse array of natural features. The Wetherill property is intricately tied to Harriet Wetherill Park and its inclusion into the park will preserve a significant cultural heritage landscape in Plymouth Township. Contiguous views, meadow and woodland are shared between the two properties, as they were originally developed.

The Harriet Wetherill Park property presents many opportunities for passive recreation, environmental education, and enjoyment of the outdoors through

the exploration of its woods, streams, meadows, and hedgerows. The agricultural activities that occur throughout the site offer citizens a chance to reconnect with the area's agrarian heritage and provide close-to-home opportunities to explore farming activities and practices. The addition of the Wetherill property to the park site expands the opportunities by integrating the farmstead structures as well as additional meadows, hedgerows, and stream corridors. Together the two parcels retain the cultural context of the farm property, expand the natural setting available for exploration and environmental education, and expand the protection of open space in a highly developed area Montgomery County.

The Harriet Wetherill Park Master Plan promotes a future that respects and protects the natural environment, offers passive recreation opportunities and introduces the potential for environmental education. The plan provides a blueprint for the park that can be implemented in various phases over time. The plan creates a vision for Plymouth Township that is both evocative of the past and the springboard for a new direction in parks and recreation: the natural world around us.



Chapter 2

Public Participation and Research

Public participation was a key component of the Harriet Wetherill Park Master Plan planning process. Public participation was important for the following reasons:

1. Local residents, visitors, and Township staff have useful and insightful information to contribute to the development of the plan.
2. It provides a forum in which concerns and ideas could be identified, aired, and addressed.
3. Stewardship and trust are established through community interaction and involvement.

Public input was gathered by working with the study committee, completing key person interviews, reviewing findings of the community survey, and holding public meetings.

Public Participation Process

Study Committee

A Study Committee was formed to help steer the development of the master plan and work with the project consultants. The committee consisted of representatives of the Plymouth Township Park and Recreation Department and Recreation Board, Plymouth Township Council, Montgomery County Planning, Colonial School District, local farmer, residents, and neighbors to the park site.

The Township's goal of preserving the 66.581 acre site as a natural resource park was a planning parameter unanimously received by the study committee. With this goal as guidance the committee provided input at the outset of the project by brainstorming other goals and ideas for the park. The questions and discussions are outlined below:

Question No. 1: *Who are the anticipated Park users?"*

- Plymouth Township residents and non-residents.
- Boy and Girl Scouts.
- Maple Acres Farm.
- Birders and naturalists.
- Colonial School District and other schools.
- Nature clubs.
- Animals and wildlife.
- Hikers.
- Equestrians.
- Plymouth Township Parks & Recreation Department.
- Seniors.

Question No. 2: *What opportunities and ideas does the Park site offer?*

- Farming in action – crop rotation, wetlands, erosion, good farming practices.
- Bird watching.
- Environmental study.
- Interpretative and educational opportunities.
- Area to enjoy the outdoors.
- Hiking.
- Interpretative signage.
- Habitat enhancements, butterfly garden.
- Relocation of the Colonial Middle School observatory.
- Camping.
- Picnics.
- Farming – how and why.
- Walkways with benches.
- ADA accessibility.
- Fishing pond.
- Partnerships with scouts and schools.
- Volunteer opportunities.
- Stewardship.
- Demonstration projects.
- Therapeutic equestrian use.
- Regional trail connections to Fort Washington Park, to Cross County Trail, to Greater Plymouth Community Center.
- Existing buildings – reuse/recycle, classrooms, picnic pavilion. The stone of the barn came from the quarry on site.

Question No. 3: *What concerns do you have about development of the Park site?*

- Inappropriate use and mis-use: drinking, litter.
- Concerns for police access, security, and safety.
- Overuse and degradation of natural habitats.
- Dogs running free.
- Carrying capacity of natural resources to sustain public use.
- Maintenance.
- Equestrians.
- Costs.
- User conflicts.
- Impact on neighbors and farming operations.
- Parking.
- Getting the word out about the property.

- Retain natural aspects of the site, don't over do it.
- Erosion.
- Deer.

Question No. 4: *What facilities and activity areas should be considered for development at the Park?*

- Parking areas.
- Restrooms.
- Paths and walkways. Wood chip for horses. Trail markers.
- Use "green design".
- Incorporate Best Management Practices (BMP).
- Exhibit areas.
- Pavilions.
- Bird houses.
- Butterfly building.
- "In Memory" opportunities.
- Pond.
- Small maintenance facility.
- Nursery stock and leaf/mulch area.

Question No. 5: *If you were to return to the Park site after 10 years, what is the one result/improvement you would want to see as an outcome of this master planning process?*

- Preserve the character of the site.
- Manage the site "as is".
- Open areas for natural enjoyment.
- Developed similar to the Peter Wentz Homestead.
- Trails for nature/education.
- Balance nature and visitor use.
- Maintain surrounding landscape.
- Preservation of nature and open space.
- Teaching farming techniques.
- Nature/bike trails with benches.
- Wildlife.
- Preserved space for kids to connect with nature.
- Balance of public uses with continued farming.
- Educate kids on history of area.
- "As is", coexists with farming.
- Do not destroy for public use.

- Natural area for migratory birds.
- Walking trails.
- Stewardship and education so kids appreciate what they have.
- Retain natural areas but introduce public use.

The committee provided input throughout the planning process through review of the site analysis and alternative master plan designs, consideration of nature center opportunities, and evaluation of operations and management strategies.

Key Person Interviews

The consulting team conducted a series of key person interviews to obtain additional input regarding Harriet Wetherill Park. Citizens and persons with specific insight into the facility were contacted. Input was gathered from Plymouth Township municipal officials, Girl and Boy Scout affiliates, nature center directors, Montgomery County Conservation District, the Plymouth Meeting Historical Society, residents and neighbors familiar with the site, and others.

General information about the Harriet Wetherill Park site and the goals established were provided to the interviewees. Interviewees were questioned about ideas they had for passive recreation park needs in the community, environmental education opportunities specific to the park's location and region and improvements they would like to see in Harriet Wetherill Park. Generally, interviewees like the site the way it is and were interested in preserving its natural resources. The interviews resulted in a variety of ideas and comments noted below:

General Passive Recreation Needs

- Historically the Wetherill Property and surrounding country-side was prime for horse farms and fox hunting. The park trails should be kept open to horses as the last of the horse farms in the Township surround the Wetherill Park Property.
- Creating a cross-country ski trail for winter use when it would not interfere with farming.
- Maintain the natural setting.
- Trails are important, citizens request access to trails.
- A well maintained picnic area for local scout troops or other community nature organizations to meet.

Environmental Education Opportunities

- Maintaining the farming activities on the site to educate individuals about Plymouth Township's agrarian heritage.
- Enhance riparian buffer plantings along Plymouth Creek and its tributaries. Add native meadow areas.
- Consider developing animal habitat and local bird exhibits.

- Suggestions for environmental education programs include backyard management strategies and interpretation of the agricultural heritage.
- Study the land use over time, utilizing various air photos from different time periods.
- Conduct native tree and plant identification tours/walks.
- Consider volunteer planting opportunities and celebrations to get people and groups involved.

Concerns

- The main concern is losing Maple Acres Farm and seeing an end to the farming activities now occurring on the park site. Maple Acres Farm is the last of the farms in the Township.
- The agricultural practices on the park site now are a resource and should be preserved. The farm, its shop, and the land it farms are assets to the community.
- If the farming does not continue, there is concern for rampant unmanaged succession growth of weeds and invasive species.
- If the buildings on the Wetherill property are reused for environmental education purposes, there is concern for safe vehicular access to them. Access to the park is much safer from Narcissa Road, and there is currently no road from Narcissa to the Wetherill buildings, but if there was one, it would destroy the main agricultural area on site.
- There is concern regarding removing or altering the Wetherill residence and other structures on site such as the barn with stables, which could have some historic significance.
- There is concern for where parking and vehicular traffic will impact the site. Do not want to lose a pasture to an asphalt parking lot.
- Concern for the number of visitors to the park, large crowds (100+) on a regular basis could be detrimental to the site.

Community Opinion Survey

A direct mail survey was sent to 1,000 households in Plymouth Township and yielded an approximate 35 percent return rate. Several questions asked residents about what they prefer to see in municipal parks and specific questions about Harriet Wetherill Park. Survey findings that relate to Harriet Wetherill Park include:

- Harriet Wetherill Park is the most important initiative in parks and recreation in Plymouth Township. Seven out of ten respondents indicated that the future focus of parks and recreation in Plymouth Township should be natural resource conservation and open space protection.
- Citizens prefer the site to remain as a natural area with limited facilities. Their most preferred facility in the park is a place to walk.

- Over half of the respondents indicated that they would like to use Harriet Wetherill Park to walk on the nature trails (66%), enjoy the peace and quiet (62%) and for exercise and fitness (53%)
- Open-ended comments from the survey respondents urged the Township to keep Harriet Wetherill Park as natural as possible.

ANCA Peer Consult

The idea of developing a nature center on the site was an early consideration for the park. To thoroughly explore this opportunity a peer consult was conducted through the Association of Nature Center Administrators (ANCA). ANCA is a network of nature center leaders that work to enhance professionalism and provide the support system critical to innovative and progressive management for nature centers. Plymouth Township engaged ANCA to conduct a peer consult to explore the following questions:

- Is it feasible to develop a nature center at the Harriet Wetherill Park site? From a Township perspective? From a regional perspective? From a site drive educational perspective?
- What environmental education focus do you think is most compelling based on need, partnership potential, site opportunities, other facilities in the region, etc.? Is an environmental focus necessary?
- What would the service area be for a nature center at Harriet Wetherill Park?
- What are the low/medium/high options for integrating environmental education and a nature center into the Harriet Wetherill Park site?
- What level of development is recommended for a nature center and environmental education activities at Harriet Wetherill Park?
- How can the existing structures be incorporated into the plans for environmental education and a nature center?
- Can the farming activities continue and remain compatible with environmental education initiatives? What are ideas for incorporating farming into the environmental programs?
- If a nature center is recommended, define actions steps for phasing into the site over time. Define staffing requirements.
- What categories of programming are appropriate and not appropriate for the site with consideration given to the need to balance public access with conservation and resource protection?
- Are there any areas of maintenance concerns based on typical nature center use at the Harriet Wetherill Park site? Are there natural resource maintenance philosophies that are important for the Harriet Wetherill Park site?
- What role do partnerships play in the initiative and how have they fit into other organizations?

- What role do volunteers play in the initiative and how have they fit into other organizations?

The ANCA consult was held on May 8 – 10, 2006 and involved five nature center professionals. The three-day work session explored opportunities associated with the Harriet Wetherill Park site and addressed the questions outlined by the Township. The ANCA professionals concluded that a nature center was certainly feasible at the park and was a great opportunity for the community.

A separate report “Nature Center Feasibility and Recommendations for the Harriet Wetherill Park” was developed by ANCA.

In addition to the ANCA consult to explore the feasibility of a nature center at Harriet Wetherill Park, the consultant team researched nature centers in the region. The findings of this research was presented to the Study Committee members and they were also encouraged to visit nearby nature center to bring ideas back to the planning process.

Public Meetings

Two public meetings were held to present project findings to the public and solicit input. The first meeting was held on July 24, 2006 to present the Pre-Final Master Plan to the residents and receive input. The agenda provided an overview of the project and work completed to date and presentation of the Pre-Final Master Plan. The plan was presented in a four phase approach. Discussion of the presentation is summarized in Chapter 4 – Alternative Designs.

The final public meeting to present the Master Plan was held during a regularly scheduled and advertised Plymouth Township Council meeting. Public meetings were advertised locally through newspaper articles and notices encouraging citizens to attend and view the work in progress on the Harriett Wetherill Park Master Plan.

Vision, Mission, and Goals for Harriet Wetherill Park

The input from the public participation process was translated into a preliminary vision, mission statement, and specific goals for the park. These initial vision, mission, and goals guided the master plan and may continue to evolve as Plymouth Township works toward its implementation.

Vision Harriet Wetherill Park

Harriet Wetherill Park is a model of conservation and public recreation for people who live, work, and visit in Plymouth Township.





Mission
Harriet Wetherill Park

Plymouth Township will plan, design, develop, program, and maintain Harriet Wetherill Park with the spirit and resources necessary to conserve the priceless legacy of the natural and culturally significant property as a public park.

Goal 1: *Protect and preserve the site's natural, cultural, and agricultural heritage.*

Objectives:

- Promote the site's agricultural heritage to create public awareness and understanding of the site's history and maintain the farming practices for future generations.
- Promote environmental education of the site's natural features encouraging respect and stewardship among users, neighbors, and the general public.
- Enhance and protect the site's natural resources and habitat areas.
- Limit introduction of public uses that would conflict with resource preservation.
- Develop resource management strategies to address invasive species, over population of deer, and other issues.

Goal 2: *Promote environmental education for students and residents of Plymouth Township.*

Objectives:

- Retain and enhance the homestead and farming areas as a living historic homestead within the park.
- Work with the farmer to allow farming to continue while integrating educational opportunities to learn about farming.
- Consider potential environmental education uses for the farm property for the future when the farmland is no longer leased.
- Manage the natural resources as a demonstration project that the general citizenry can learn from by example.
- Expand the homestead building to better accommodate current uses and expand the environmental education programming opportunities.
- Incorporate birding facilities as appropriate in public access areas.
- Identify interesting and unique features of the park that could be interpreted through nature study activities and interpretive signage.
- Promote "green design" in future improvements.

Goal 3: *Explore the dominant themes for Harriet Wetherill Park of farming, native grasses, and trails.*

Objectives:

- Develop farming, native grass, and trail themes as appropriate throughout the site.
- Consider the input from the ANCA consultation in the development of educational themes.
- Maintain farming in the western portion of the park site, currently the primary fields used by Maple Acres Farms.
- Protect, explore, and potentially expand the native grass areas found throughout the site.



Chapter 3

Resources of Harriet Wetherill Park

Introduction

Harriet Wetherill Park is an oasis within a heavily suburbanized area. The park site offers diverse landscapes including natural areas, agricultural fields, historic homestead, and equestrian facilities. This master plan was developed to provide a blueprint for the future of the site as a municipal resource based park. Through the planning process, an extensive inventory and analysis of the site was completed to gain an understanding of the site's natural resources and an assessment of the built facilities. The inventory and analysis is critical for the following reasons:

- To evaluate the site's natural resources and determine appropriate protection and enhancement strategies.
- To evaluate the built features to determine their appropriateness and utility in a park setting.
- To evaluate the ability of the site's resources to sustain and thrive with the introduction of public use.
- To explore natural resources that contribute to the visitor's experience.
- Good design is born of good analysis.
- To become familiar with the context of the region and the site.
- Development costs are greatly influenced by the ease of construction and compatibility of the proposed development with the natural systems of the site.

The Site Analysis Map on page 3-3 documents the observations of site visits, conclusions of the site analysis, and information previously documented regarding the site. Existing information provided by Plymouth Township included the topographic and boundary line survey completed in October 1995 by Chambers Associates, Inc. A wetland delineation report for the park was completed in November 2005 by Rettew Associates, Inc.

Site Description

Harriet Wetherill Park is located on Narcissa Road in Plymouth Township, in south central Montgomery County, Pennsylvania. Situated northeast of Plymouth Meeting, and north of the Pennsylvania Turnpike Norristown Exit, the site is surrounded by single family residential homes.

The property includes the 51.818 acre Harriet Wetherill Park acquired by Plymouth Township as permanently protected open space, which was secured in two tracts: the Larkin Tract (11.511 acres) and the Wetherill Tract (40.307 acres), and a newly acquired 14.763 acre tract, the previous homestead of the Wetherill family for a total of 66.581 acres.

The existing Harriet Wetherill Park occupies the northern and western areas of the site. The public is most familiar with the primary ingress and egress to the park site located on Narcissa Road identified with a park sign. A gravel parking area adjacent to an existing 15' wide bridge crossing a tributary to the Plymouth Creek leads into the 51.818 acre parcel. The existing park is primarily agricultural lands farmed by Maple

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This vertical strip contains nine photographs showing various landscape features. From top to bottom: a gravel area with a yellow line; a field of tall, dry grass; a dirt path; a field with a wooden fence; a large, two-story house with a porch; a field with trees; a field with a wooden fence; a field with trees; and a field with a wooden fence.

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SOILS LEGEND				
Symbol	Soil	Slopes	Depth to Bedrock (ft.)	Seasonal High Water Table (ft.)
ABa	Abbotsloven silt loam	0% - 3%	3 - 8	0.5 - 1.5
Ba	Bowmansville Silt Loam	0% - 3%	3 - 8	0 - 0.5
Br	Bowmansville Silt Loam, Local Alluvium	0% - 3%	3 - 8	0 - 0.5
ESd	Edgemont Very Stony Loam	8% - 25%	3 - 5	3+
LeA	Lawrenceville Silt Loam	0% - 3%	4 - 12	1 - 2
LeB2	Lawrenceville Silt Loam	3% - 8%	4 - 12	1 - 2
PIB2	Penn-Lansdale Loams	3% - 8%	1.5 - 3	3+
PIB3	Penn-Lansdale Loams	3% - 8%	1.5 - 3	3+
PIC2	Penn-Lansdale Loams	8% - 15%	1.5 - 3	3+
PIC3	Penn-Lansdale Loams	8% - 15%	1.5 - 3	3+
ReB2	Readington Silt Loam	3% - 8%	3 - 5	1.5 - 2.5
Rt	Rowland Silt Loam	0% - 3%	4 - 6	0 - 2

NOTE: PER MONTGOMERY COUNTY SOIL SURVEY



Acres Farm in agreement with the Township. There are earthen trails throughout, grass meadows, and wooded hedgerows.

The Wetherill homestead property is located off of Butler Pike in the southern portion of the total site and provides a secondary access point into the park. The Wetherill homestead property is characterized by multiple equestrian pastures, divided by wooden post and rail fences, the homestead and associative farm structures are used for horse boarding and riding.

Surrounding Land Use

- Eastern Boundary:* There are three single family residential properties bordering the eastern property, all are obscured by woodland.
- Western Boundary:* Seven properties border the western property line, six of which are single family residential properties with obscured to partial sight lines from the park. The agricultural lands of Maple Acres Farm are across Narcissa Road to the west.
- Southern Boundary:* Six single family residential properties border the southern property line and across Butler Pike to the south. All properties are somewhat visible from the park.
- Northern Boundary:* Six single family residential properties border the park to the north. All have high visibility into the park.

Natural Resources

Water Resources

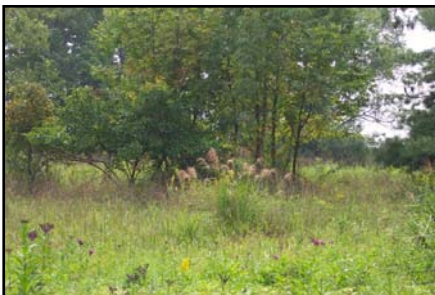
Wetlands, man-made ponds, and stream channels are regulated by the United States Army Corps of Engineers (USACOE) and the Pennsylvania Department of Environmental Protection (PADEP) and any encroachments, fills or crossing of these areas will require the proper State and Federal permits.

Wetlands – One wetland was identified on the park site totaling 0.231-acres outlined in the Wetland Delineation Report prepared by RETTEW Associates, Inc.

The Wetlands #1 is identified as a palustrine emergent, scrub shrub (PEM/SS) wetland situated on the western end of the site. The wetland consists of an old pond basin and a small PSS fringe wetland within the flood plain of Stream #3. Wetland #1 occurs along the property line away from the entrance drive and existing bridge from Narcissa Road. Park improvements should not infringe upon or conflict with this area.

Streams – Four watercourses exist on the park site. All were determined to be Plymouth Creek and its related tributaries. Plymouth Creek flows southwest through the site and Township,





continuing through Conshohocken Borough where it outlets into the Schuylkill River.

- Stream #1 consists of a perennial bed and bank stream channel identified as an unnamed tributary to Plymouth Creek. This stream flows south along the eastern end of the site and converges with Plymouth Creek on the southern end of the site.
- Stream #2 consists of a perennial stream channel that was identified as Plymouth Creek. The creek flows southwest from the southeast end of the site and is contributed by Stream #1, Stream #4, and a small upland drainage feature. Plymouth Creek is channelized for approximately 100-feet where it flows in front of the main residence in the southern portion of the site.
- Stream #3 consists of a perennial stream channel identified as an unnamed tributary to Plymouth Creek. This stream flows south along the western end of the site within the two small parcels that border Narcissa Road on the western end of the site. Stream #3 is transversed by an existing 15-foot wide bridge.
- Stream #4 was identified as an unnamed tributary to Plymouth Creek with a small section flowing south along the southeastern property line of the site.

Land Resources

Vegetation – From a vegetative stand point, Harriet Wetherill Park truly is an oasis providing a refuge for native flora and fauna. The natural systems are challenged to sustain themselves within the surrounding developed landscape of suburban residential land use. The land cover vegetation of the site varies throughout the park. Meadow areas exist as well as agriculture fields, riparian corridor vegetation, hedgerows, and wetlands. The park site has an unparalleled resource of native grasses and their representative communities and habitats. Residential encroachments of mowed lawns and landscaping are found along the northern boundary near the cultivated field.

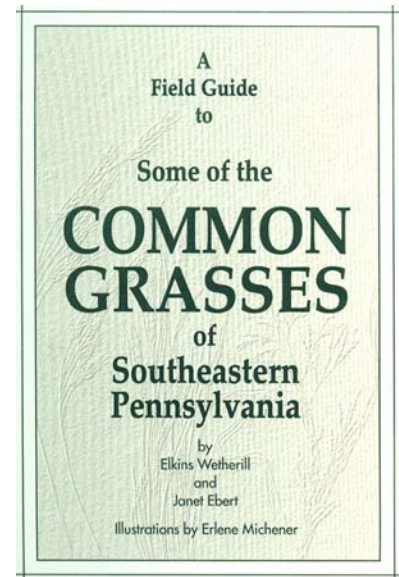
- Open Fields and Meadows – The eastern area of the site is an open meadow, which was previously a cultivated field allowed to go fallow. Various grass and weed species are present and the area is mowed at least annually to prevent succession from taking over the land. A second meadow is present along the northwestern area of the site, and characterized as a ‘succession meadow’. There are small succession species throughout the area as well as many native grass species.
- Pasture Fields – The Wetherill family has a passion for equestrian activities and pastures exist in the center of the site and around the existing homestead for the horses to exercise and graze.
- Woodland and Edges – Succession forest patches and areas of scrub vegetation occur along the boundary lines throughout the site, particularly along the western and eastern borders. The

northern and southern borders have woodland edges separating residences. In general these residents keep the property lines groomed, removing scrub vegetation to allow clear sight lines into the site. Within the site, there are hedgerows dividing the site into distinct areas. Some hedgerows have succession occurring within them and others are host to a variety of woodland species and invasive species such as multi-flora rose and grapevine. Dominant fill species include maple, oaks and ash trees.

- **Grasses** – The established succession meadow on the northwestern portion of the park is home to many of the grasses Mr. Wetherill has cultivated and written extensively about in his book, “**A Field Guide to Common Grasses of Southeastern Pennsylvania**”, by Elkins Wetherill and Jane Ebert, Brandywine Conservancy, Inc., 1995. There is a mowed access trail along the perimeter of the meadow maintained for the Harriet Wetherill Park. The various grasses and their locations are noted on the Grass, Wildflower and Other Important Species Location Map on page 3-7.
- **Invasive Species** – As with most park sites, the threat of invasive species is a constant concern and resource management issue. Aggressive competitors for space and nutrients, they crowd out native species and cause the decline of native wildflowers, grasses, and other plants. They adversely affect many native animal species, which depend on a diverse and healthy native flora for their survival. Once invasive species get a foothold on a site they often propagate rapidly, taking over and covering valuable land and natural resources. The longer invasive species occupy a site the more costly and time consuming it is to eradicate them and reclaim the land. A few of the invasive plant species identified on the site include *Celastrus orbiculatus* (Oriental Bittersweet), *Rhamnus cathartica* L. (Common Buckthorn), *Lonicera spp.* (Bush Honeysuckle), *Rosa multiflora* (Multiflora Rose), *Paulownia tomentosa* (Princess Tree), and *Ailanthus altissima* (Tree of Heaven).
- **Riparian Corridor Vegetation** – Riparian corridor vegetation occurs along Plymouth Creek which traverses the site north to south. Riparian buffers provide important landscape functions and should be maintained and enhanced.

Wildlife Habitat – The park site offers diverse landscapes for various species of mammals and birds. The site is well suited for bird watching and attracts hawks and many passerine and migratory species. Any park which has cultivated or large mowed areas, Canadian geese may seek refuge and the populations need to be managed to prevent degradation of the site.

The site is home to many small and large mammals that are typically found throughout eastern Pennsylvania. There are white tail deer in the woodlands and their population has reportedly grown to six -10



Benefits of Riparian Buffers

- **Stabilize Streambanks** – Deep-rooted vegetation binds the soil along streambanks, stabilizing the banks and preventing erosion during periods of high runoff.
- **Improve Water Quality** – Vegetation along streams traps sediment, nutrients, and pollutants before they enter the stream or groundwater.
- **Enhance Wildlife Habitats** – Trees, shrubs, and grasses along streams provide habitat and travel corridors for many wildlife species.
- **Reduce Flooding and Sedimentation** – Vegetation retains stormwater runoff longer, improves infiltration, and filters sediment from flowing downstream during floods.
- **Keep Streams Cooler and Healthier** – Shade from riparian buffers cools the stream waters, increasing the food and oxygen for aquatic life.
- **Enhance Scenery** – Vegetation along streams adds beauty and diversity to the landscape.

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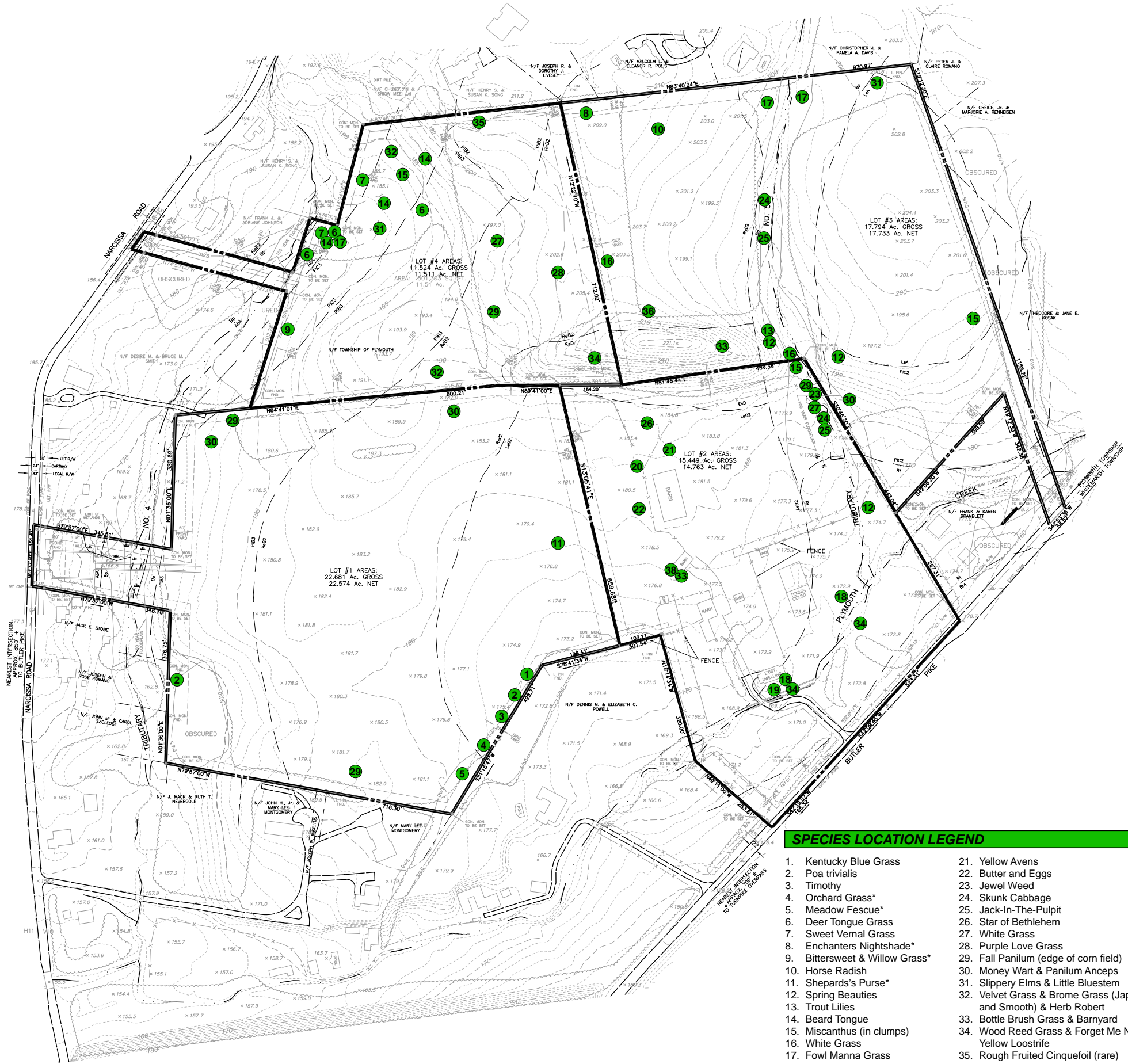
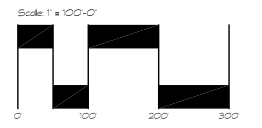
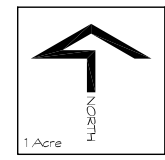
Harriet Wetherill Park

Grass, Wildflower and Other
Important Species Locations
Provided By Elkins Wetherill

Plymouth Township
Montgomery County
Pennsylvania
2006

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SPECIES LOCATION LEGEND

- | | | | | |
|--------------------------------|--|------------------------------|--------------------------------|------------------------------------|
| 1. Kentucky Blue Grass | 21. Yellow Avens | 39. Foxtail (Giant & Green)* | 59. Daisyies* | 79. Yellow Burdock* |
| 2. Poa trivialis | 22. Butter and Eggs | 40. Crab Grass* | 60. Evening Primrose* | 80. Dames Rocket* |
| 3. Timothy | 23. Jewel Weed | 41. Purple Top* | 61. Grape Hyacinth* | 81. Phlox* |
| 4. Orchard Grass* | 24. Skunk Cabbage | 42. Goose* | 62. Indian Tobacco* | 82. Common Sorrel* |
| 5. Meadow Fescue* | 25. Jack-In-The-Pulpit | 43. Chickweed* | 63. Jimpson Weed* | 83. Gil over the Ground* |
| 6. Deer Tongue Grass | 26. Star of Bethlehem | 44. Nimble Will* | 64. Smart Weeds (various sp.)* | 84. Black-Eyed Susan* |
| 7. Sweet Vernal Grass | 27. White Grass | 45. Japanese Stilt Grass* | 65. Tear Thumb* | 85. Butter Cup* |
| 8. Enchanters Nightshade* | 28. Purple Love Grass | 46. Wild Rye* | 66. May Apple* | 86. Honey Suckle* |
| 9. Bittersweet & Willow Grass* | 29. Fall Panilum (edge of corn field) | 47. Lobelia* | 67. Bunch Berry* | 87. Plantain (Common and English)* |
| 10. Horse Radish | 30. Money Wart & Panilum Anceps | 48. Iron Weed* | 68. Milk Weed* | 88. Wild Roses* |
| 11. Shepards's Purse* | 31. Slippery Elms & Little Bluestem | 49. Golden Rod* | 69. Morning Glory* | 89. Self-Heal* |
| 12. Spring Beauties | 32. Velvet Grass & Brome Grass (Japanese and Smooth) & Herb Robert | 50. Hickory* | 70. Mustard* | 90. Violets* |
| 13. Trout Lilies | 33. Bottle Brush Grass & Barnyard | 51. Horse Nettle** | 71. Thistle* | |
| 14. Beard Tongue | 34. Wood Reed Grass & Forget Me Not & Yellow Loostrife | 52. Flower of an Hour** | 72. Virginia Day Flower* | |
| 15. Miscanthus (in clumps) | 35. Rough Fruited Cinquefoil (rare) | 53. Velvet Leaf** | 73. Michaelmas Daisy* | |
| 16. White Grass | 36. Wedge Grass (uncommon) | 54. Virginia Knotweed* | 74. Asters (various sp.)* | |
| 17. Fowl Manna Grass | 37. Perennial Rye Grass* | 55. Snake Root* | 75. Crable Apple (sm. tree)* | |
| 18. Celandine | 38. Paspalum | 56. Harmony* | 76. Poke Weed* | |
| 19. Speedwell* | | 57. Daylily* | 77. Beggar Ticks* | |
| 20. Bird's Foot Trefoil | | 58. Hawkweed* | 78. Blue-Eyed Grass* | |

* Indicates that species is found growing throughout location area or property.
**Indicated that the species is only found in cultivated areas on site.

animals. As the amount of open space in the area reduces, more fragmentation of land cover occurs forcing the deer populations to stay in one area, such as the park. Their numbers should be monitored and controlled in the future as they could have a negative effect on the vegetative underbrush. Plymouth Township staff can address the negative effects of deer on the site by fencing areas to exclude deer and promote re-vegetation. Other species noted at the site include squirrels, rabbits, foxes, raccoons, and other small mammals. Wild turkeys have been seen on the site.

Soils – The U.S. Department of Agriculture (USDA), Soil Conservation Service, Soil Survey for Montgomery County, Pennsylvania indicates the site has twelve soil classifications. The Site Analysis Map identifies the locations of soils.

Harriet Wetherill Soil Characteristics						
Soil Legend	Soil Type	Erosion Hazard	Prime Farmland	Depth to Seasonal High Water Table (ft)	Depth to Bedrock (ft)	Drainage
AbA	ABBOTTSTOWN SILT LOAM, 0% to 3 % slopes	Slight	N	0.5 – 1.5	3 - 8	Slow and ponding common
Bp	BOWMANVILLE SILT LOAM, 0% to 3% slopes	Slight	N	0 – 0.5	3 - 8	Slow and frequent flooding
BrA	BOWMANVILLE SILT LOAM, LOCAL ALLUVIUM, 0% to 3% slopes	Slight	N	0 – 0.5	3 - 8	Slow and ponding common
EsD	EDGEMONT VERY STONY LOAM, 8% to 25% slopes	Slight	N	3+	3 - 5	Slow to medium
LeA	LAWRENCEVILLE SILT LOAM, 0% to 3% slopes	Slight to Moderate	Y	1 – 2	4 - 12	Slow
LeB2	LAWRENCEVILLE SILT LOAM, 3% to 8% slopes	Moderate	Y	1 – 2	4 - 12	Moderately drained
PIB2	PENN-LANSDALE LOAMS, 3% to 8% slopes	Moderate	N	3+	1.5 - 3	Medium runoff rate
PIB3	PENN-LANSDALE LOAMS, 3% to 8% slopes	Severe	N	3+	1.5 - 3	Rapid runoff rate
PIC2	PENN-LANSDALE LOAMS, 8% to 15% slopes	Moderate	N	3+	1.5 - 3	Medium to rapid runoff rate
PIC3	PENN-LANSDALE LOAMS, 8% to 15% slopes	Severe	N	3+	1.5 - 3	Rapid runoff rate
ReB2	READINGTON SILT LOAM, 3% to 8% slopes	Moderate	Y	1.5 – 2.5	3 - 5	Medium runoff rate
Rt	ROWLAND SILT LOAM, 0% to 3% slopes	Slight	Y	0 – 2	4 - 6	Slow with frequent flooding

Man-Made Resources and Influences

Transportation Routes and Access

Roadways surround the Harriet Wetherill Park. Main access roadways in the area of the site include:

Narcissa Road – This road carries local traffic traveling in a northeast-south, southwest direction from Skippack Pike in Whitpain Township to Butler Pike on the border of Plymouth and Whitemarsh Township.



Harriet Wetherill Park fronts on Narcissa Road for approximately 150-feet along the western property line. The existing park sign, parking, and park access are all off of Narcissa Road. Adequate sight distance is available at the frontage to the south; however overgrown shrubs obscure sight distance to the north. The speed limit is posted at 25 miles per hour. Beyond the public access to the park, the entrance off of Narcissa Road is also used by neighboring Maple Acres Farm tractors and farming vehicles for agricultural purposes.



Butler Pike – This road carries regional traffic in Montgomery County traveling in a northeast-southwest direction from Limekiln Pike in Lower Gwynedd Township to the Schuylkill River in Conshohocken Borough. There is approximately 700-feet of frontage onto Butler Pike in the southwest corner of the property. The existing driveway to the Wetherill residences and farm is from Butler Pike. Adequate sight distance is available in both directions. The posted speed limit is 25 miles per hour. Traffic was noted as heavy during every site visit and significant road noise is noticeable in the southern portion of the site from Butler Pike traffic. There is no vehicular road in the park that connects the two entrances.

Montgomery County Cross County Trail – Harriet Wetherill Park is close to the designated route of the Montgomery County Cross County Trail which is proposed to traverse Whitemarsh Township and connect the Schuylkill River Trail with Fort Washington Park. Connection to this trail would provide a regional, off-road link for visitors to Harriet Wetherill Park.



Harriet Wetherill Park Bridges – The bridge crossing the tributary to Plymouth Creek that is located somewhat parallel to Narcissa Road and provides access to the park site from the Narcissa Road entrance was developed by Plymouth Township. Information on the bridge indicates at weight rating of 25 tons. This rating should be confirmed prior to the development of park improvements. The homestead property contains two bridges crossing Plymouth Creek; a vehicular bridge providing access to the barns and outbuildings and a pedestrian bridge providing access to the front door of the main house. Weight rating information on these structures is unknown and a structural assessment should be completed and the bridges replaced as necessary to accommodate the uses proposed within this master plan.



Utilities in the Area of Harriet Wetherill Park

Public utilities are sporadically available in the area of Harriet Wetherill Park including public water, public sewer, and electric service.

Water – There is no public water available in the area of the park along either Butler Pike or Narcissa Road. Adjacent properties as well as the Wetherill homestead are served by private water wells. The Wetherill well is located in the area of the existing homestead structures. Maple Acres Farm has extended water to the large eastern agricultural field via a primitive PVC system that extends through a culvert under Narcissa Road. This water line is used in agricultural

practices and is fed from a well on the Maple Acres Farms property. This water is not available for park use.

Sewer – An on-lot septic system provides sewer disposal for the Wetherill homestead site. Whitemarsh Township has public sewer located along Butler Pike.

Electric – PECO Energy supplies electric service to the Harriet Wetherill Park area.

Structures

The primary structures are the buildings associated with the Wetherill homestead. The main home is complemented with a carriage house, barns, sheds and other structures associated with the families' interest and love of horses. The following narrative generally describes the structures of the Harriet Wetherill Park:

The Wetherill Home – The main residence is a large stately three-story stone structure, four bays wide and two deep with several porches and an enclosed patio in the rear. The home is meticulously maintained and manicured and is in very good condition. The homestead does not meet the accessibility requirements of the ADA.

Caretaker House – Located behind the Wetherill homestead further along the main access drive is a small two story wood frame residence for the former caretaker.

Barn/Garage – Located across the drive from the caretaker's house is a two story barn/garage with a second story apartment on the southern end of the building that appears to be a former carriage house. This building is actively used at this time.

Stable/Sheds – Located along existing fence lines to the northwest of the Wetherill homestead, within the pastures are two small 20'x20' run-in sheds for the horses. A third shed is a three-bay structure use for storage of farm equipment and materials.

Barn – A small barn with horse stalls stands between two of the main northern pastures and north of the caretaker house. The barn is actively used to board horses and for storage.

Indoor Riding Barn – The northern most structure on the site is an indoor riding barn, approximately 55'x 120'. The structure is of pole-barn construction with corrugated metal siding and an interior that is open with a soil floor. The structure was built in the 1970's and the architectural assessment (Appendix A) indicates that the building "has reached or is fast approaching its useful life span. This coupled with the fact that adaptively reusing the building would require the removal of all existing materials down to the frame and the installation of new foundations, floor systems, wall systems, insulation, interior finishes and roof systems raises questions regarding the economic feasibility of reuse for a building program that requires conditioned interior space."





Other Structures – Other structures on site include:

- Pool - A relatively small in-ground pool and patio are located directly behind the main residence.
- Tennis Court - A tennis court exists in a pasture to the northeast of the Wetherill residence. The court is surrounded by eight foot tall chain link fence that is rusting and leaning over in places. The tennis court asphalt is cracked and in disrepair.
- Corral - In the northern pasture to the east of the indoor riding barn there is an existing large rectangular fenced corral with a stone surface and various horse-riding obstacles for jumping.

Summary of Site Analysis Findings by Area

Site analysis was performed in each of the four seasons for the Harriet Wetherill Park site. The site analysis findings are keyed to the Site Analysis Map on 3-3. Findings are organized by geographic area depicted on the Site Analysis Map.

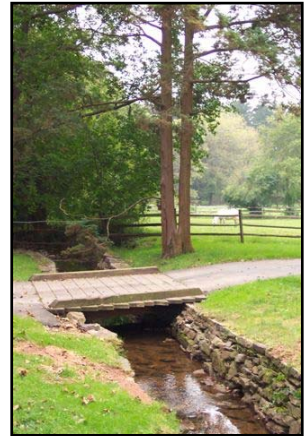
Area A – Harriet Wetherill Park Entrance off of Narcissa Road (western most portion of the site)



- Area A is approximately 23 acres in size, with a combination of cultivated and fallow fields on gently undulating slopes.
- Area A is an area with an existing entrance from Narcissa Road with an associated gravel parking area for 10-15 vehicles.
- There is limited sight distance to the north and adequate sight distance to the south for ingress and egress at the entrance.
- An unnamed tributary to Plymouth Creek flows through the site from the north to south adjacent to the site. A 15' wide stone pier/timber deck bridge exists to cross the tributary to enter the main body of the site. The stream is located on park land as well as lands of private homeowners contiguous to the park.
- There is dense vegetation along the western property line screening the view into the site from Narcissa Road. A view into the site exists at the bridge crossing.
- Residential properties surround the Harriet Wetherill Park site. The homes provide a visual presence on the southern portion of Area A, and the property owners have cleared the dense scrub vegetation out of the hedgerow. Dense vegetation exists along the western boundary screening any view of the existing residential homes.
- A farmer currently has an agreement to farm the land and uses it to produce small crops on a yearly basis which he sells offsite.
- There is a 10'-12' perimeter mowed grass walking trail along the perimeter. The trail does not meet ADA requirements.

Area B – Life Estate of Mr. and Mrs. Wetherill (south central location of the site)

- This area exists primarily as an equestrian farm with the associated homestead, stables, outbuildings, barns, etc.
- Area B is approximately 15 acres in size with a relatively flat terrain.
- There are multiple pasture areas with wooden post and rail fencing.
- An aggregate equestrian area exists on the northern portion of Area B, with multiple jumps and equipment for training horses.
- A dense woodland buffer with steep slopes exists on the northern and eastern boundaries providing visual separation from Areas C, D and E.
- The main farmhouse for the homestead is located 80' off of Butler Pike through a grove of mature sycamore trees.
- The access drive is a paved 13' wide asphalt drive. An 11' wide wooden bridge crosses Plymouth Creek, the creek flows from north to south, turning from east to southwest in a defined rock lined channel the length of the site. The bridge connects the residence to Butler Pike.
- There is adequate sight distance in both directions along Butler Pike.
- The vegetation along the southeastern boundary is mature sycamore trees with a mowed and manicured understory.
- Adjacent properties are residential with limited views into the site.
- Structures in Area B include a carriage house with a flexite exterior, a concrete block and wood house and garage combination structure. There are two wooden barns, two wooden stables, two run-in sheds, and an indoor riding barn with prefabricated metal siding, a tennis court with fencing in need of some repair, and an in-ground swimming pool. The structures were evaluated in the Architectural Assessment Summary completed by the architecture firm of George Donovan AIA and Associates (see Appendix A).



Area C – Open Meadow Area (eastern portion of Harriet Wetherill Park site)

- Area C is comprised of approximately 10 acres of primarily cultivated and fallow fields.
- Plymouth Creek, contained within a densely vegetated hedgerow, extends the entire western border of Area C, flowing from north to south.
- Two trail access points, one in the northwest from Area D and the other in the southwest from Area B, require the crossing of Plymouth Creek.





- Hedgerow vegetation surrounds Area C on all sides, creating separation from the rest of the site.
- The adjacent land uses are residential. The home on the southern property can be seen through the trees, all others are visually screened with thick vegetation.
- A 50' wide access strip of land connects Area C to Butler Pike in the eastern most portion of the site.
- A mowed walking trail encircles the open fields. The existing trails are not accessible per the requirements of the ADA due to slope and surfacing.
- Within the woodland border on the western edge is a yard waste dump area.
- The western half of the open field is cultivated for small crops. The eastern half of the open field is fallow with grasses and weeds occupying the landscape.
- The open field tends to have shallow soils and pockets of wet areas throughout the site.
- The slope is a gentle rise from south to north with a high point existing in the northeast portion of the field.

Area D – Cultivated Field (north and central area of the site)



- Area D is a seven and one-half acre cultivated field, currently planted in winter wheat.
- Plymouth Creek flows north to south along the eastern border. The area along the western shore of the creek at the northern end is home to “spring beauties”, a rare flower blooming only two days each spring.
- A mowed walking trail encircles the open fields along the woodland borders. The existing trails are not accessible per the requirements of the ADA due to slope and surfacing.
- Three boundaries have dense wooded vegetation.
- The adjacent land use on the northern boundary is residential with a wire fence separating the property from the park. There is an iron gate with stone pillars between the properties. A portion of the park is mowed as part of the adjacent landowner.
- The land is gently sloped north to south.



Area E – Cultivated Field (north and central area of the site)

- Area E is five acres in size, currently a cultivated field of corn.
- The land is gently sloped north to south.
- A mowed walking trail encircles the open fields along the woodland borders.
- The adjacent land use on the northern boundary is residential with mature vegetation separating the properties with very little understory vegetation for screening.

Area F – Succession Meadow (northwestern area of the site)

- Area F is six acres in size, currently a succession meadow with pockets of mature and succession plants scattered throughout.
- The land is gently sloped south to northwest.
- A mowed walking trail encircles the open fields along the woodland borders.
- The adjacent land uses to the west and north are residential with mature vegetation and heavy understory plants separating the properties.
- A 50' wide access strip of land connects Narcissa Road to the western most portion of the site. The strip of land is heavily overgrown and bisected at the western property edge by an unnamed tributary of Plymouth Creek.
- Area F currently is home to 20 of the grasses, Mr. Wetherill has cultivated and written about.



Conclusions

The site analysis provided valuable information that guided the final master plan for the Harriet Wetherill Park. Conclusions include:

General Conclusions –

- The Harriet Wetherill Park is a natural oasis in the midst of extensive suburban development.
- The main homestead and equestrian areas are the focal point of the property and occupy approximately one third of the park.
- The ongoing agricultural practices are a scarce feature in the surrounding area and have an important story to tell future generations.
- The site is divided into a series of outdoor rooms, defined by hedgerows. Each room offers a unique environment.
- Current vehicular (farm equipment) and pedestrian circulation patterns should be defined to minimize conflicts.
- Perimeter roads are heavily traveled. Safe ingress and egress to the site must be provided.
- The Harriet Wetherill Park is located in close proximity to the designated route of Montgomery County's Cross County Trail. Connection to this trail would promote regional access to the Harriet Wetherill Park site.
- Pedestrian circulation routes must meet the requirements of the ADA to provide like opportunities for physically challenged persons to experience the natural areas.
- Surrounding residential neighborhoods are pinching the park and its vegetative buffer in various areas. The buffers should be

maintained and enhanced where possible to maximize the buffer and respect the neighbors' privacy.

Resource Protection –

- Public access to the 66.581-acre park should be carefully balanced with resource protection objectives.
- The Park's natural areas should be protected and conserved.
- The site agricultural soils should be highlighted, as it is one of the few remaining farms in the area.
- Property encroachments should be identified and addressed.
- Maintenance practices (mowing, clearing) should involve Best Management Practices to enhance water quality.
- Steep slopes have limited occurrence within the Harriet Wetherill Park site, but must be respected with any improvements to minimize erosion and align with the requirements of the ADA.
- Existing voids in the vegetative cover should be planted to provide habitat area, filter stormwater runoff, minimize erosion, minimize maintenance, and reduce fragmentation. Meadows should replace lawns where practical.
- Invasive species should be eradicated to promote native vegetation and habitat for wildlife.
- Wildlife habitats should be preserved and enhanced through planting of native vegetation to supply food and shelter.
- Connectivity of the forest vegetative cover should be promoted to bridge the gap for wildlife movement and minimize edge areas where invasive species could be introduced.
- Involve surrounding landowners in stewardship initiatives.



Chapter 4

Alternative Designs

The three conceptual alternatives for the Harriet Wetherill Park site have been designed to achieve the following goals:

- Protect and preserve the natural and cultural resources of the site.
- Provide environmental education opportunities for students and residents of Plymouth Township
- Maintain farming in the eastern portion of the park site, currently the primary fields used by Maple Acres Farms.
- Explore the three dominant themes/ideas resulting from the study committee and ANCA input received to date:
 - Farming
 - Native grasses
 - Trails

Each of the conceptual alternative designs can be implemented in phases and consider the life estate. The designs are illustrated in their final configuration but implementation of each design would be generally phased as follows.

- Phase 1 – Introduce facilities to promote use of the site with minimal disruption to the site function and layout and limited investment. The goal of this phase is to increase use of the existing park portion of the site and build public awareness and support.
- Phase 2 – Introduce additional facilities to the site to expand the use and the convenience for individuals and group users. The investment in the second phase would increase use through introduction of additional facilities and enhancement of the natural setting for environmental education. The improvements of this phase would be on the current park site. The goal of this phase is to increase use and develop support for future improvements.
- Phase 3 – Complete the improvements and natural areas enhancements identified on the design. This phase of the project would encompass the entire park site and require the largest investment.

The conceptual alternatives provide educational opportunities that relate to the Pennsylvania Department of Education – Academic Standards for Environment and Ecology for:

- Agriculture and Society
- Ecosystems and their Interactions
- Humans and the Environment.

These standards present environmental and ecological information that Pennsylvania’s public schools shall teach and identify testing criteria for grades 4, 7, 10, and 12.

Conceptual Alternative A

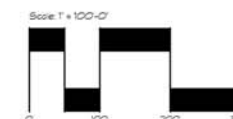
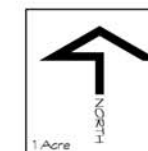
Guiding Concept – Present the cultural heritage landscape of the region through the retention of farming activities, continued use of farm structures, and the preservation of natural areas.

The agricultural use areas of the site have been retained with the exception of the northeastern field and a portion of the field in the north central portion of the site. Meadows, native planting, and a pond have been introduced to enhance the site and provide additional opportunities for environmental education. The main home and barn have been retained in the homestead area and garden has been introduced for cultural heritage programming. The indoor riding rink is reused as a structure for environmental education and passive recreation programming.

Access to the site is from Narcissa Road and Butler Pike with a new parking area introduced parallel to Butler Pike. A picnic pavilion, open lawn, and restrooms are established on the western side of the site. Trails traverse the site to explore the agricultural, natural, and cultural resources retained and enhanced for educational and leisure enjoyment.

Programming themes include:

- The cultural heritage landscape of the region – spring planting, fall harvest, farm life, etc.
- Food – field to table
- Simple living – self-sufficient gardening
- Landscape diversity, pond, grasses, hedge rows, woods, meadows, stream corridors, etc



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ASSOCIATES, INC.

Harriet Wetherill Park Conceptual Alternative A

Plymouth Township
Montgomery County
Pennsylvania

June 2006

Conceptual Alternative B

Guiding Concepts – Living off the land. Retain the natural resources and agricultural areas of the site and explore how man related to the land in the past and could re-connect to the land in the future.

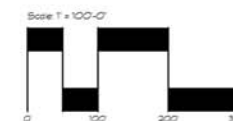
The agricultural use of the site is retained in the main field and the smaller fields have been converted to natural areas through succession and planting of native vegetation. A wildlife blind, stream observation platform, and trails are located to explore the sites many natural areas. Educational activities are housed in a new nature center building complemented with outdoor amenities such as pavilions, amphitheater seating, and interpretative gardens. The nature center is envisioned as a “green” building developed to demonstrate environmentally friendly building and site planning techniques. The barn is used for storage and maintenance and the main home is leased to a site caretaker.

Access to the site is from both Narcissa Road and Butler Pike. Parking is expanded at both of these entrances with drop-offs and information signs. A picnic pavilion and restroom are located on the western portion of the site.

Programming themes include:

- Field to Table - Maintain open agricultural field as continued farming.
- Grasses of Pennsylvania - Maintain and enhance the existing grasses.
- Succession Forest - Allow cultivated fields to succeed to forest.
- Riparian Corridor - Fortify and enhance riparian buffer with BMP's and plantings.
- Wildlife Habitat - Enhance/develop a natural habitat to encourage wildlife.
- Woodlands and Geology - Interpret the existing mature woodland, hedgerow vegetation, and underlying geology.
- Nature Center Hub - Develop a central hub for environmental education activities and unify the site.

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RETTEW
 ASSOCIATES, INC.

Harriet Wetherill Park

Conceptual Alternative B

Plymouth Township
 Montgomery County
 Pennsylvania

June 2006

Conceptual Alternative C

Guiding Concepts – Growth Under the Moon. Relate agriculture and natural resources to natural systems. Translate the Farmers Almanac creatively throughout the site to illustrate how farming practices relate to nature and evolved from an understanding of the sun and moon patterns, wind, and climate changes.

Farming is maintained in the large open field, but on a smaller scale with a trail encircling the field and interpretative signage introduced that relate the seasons and solar calendar to farming activities. The northern portion of the site has been “naturalized” through introduction of native plantings and succession. The hub of environmental education on the site is housed in the existing riding rink which is converted for indoor environmental education purposes and complemented with amphitheater seating at an outdoor classroom, drop-off and parking area. Picnic pavilion and restrooms are introduced on the western portion of the site. The observatory from the Colonial School District is located on the site and planetarium could be relocated within the environmental education building. Trails explore the full extent of the site for leisure and exploration of natural resources.

The barn is reused as programming space, maintenance, and storage. The first floor of the main house is used for small group gatherings and fundraising events and the second floor is leased to a park caretaker.

Programming themes include:

- The solar system
- Natural systems
- Sustainability
- Simple living – green

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Study Committee Meeting to Review the Conceptual Alternative Plans

A study committee meeting was held on June 6, 2006 to present and discuss the three conceptual alternative designs for Harriet Wetherill Park and receive input. Members of the Study Committee, Plymouth Township Council, Plymouth Township Park and Recreation Board, Colonial School District, Montgomery County Planning Commission, Montgomery County Park Board and approximately 18 residents attended the meeting. Following the presentation the meeting was opened for discussion with the following comments summarizing the meeting:

- There was a strong desire to keep farming in the park.
- The desire was expressed to keep the park site as natural as possible and add educational opportunities.
- A pond may not work on the site as the water table is too low, overland stormwater runoff would be too minimal to sustain a pond, and the stream flow could not be directed to the pond.
- Limit where “active” elements are introduced without building the park out.
- Encourage people to come to the park, especially children.
- Look for the “invisible” education opportunities. The “jewel” of the site is farming and nature. The grasses promoted by Mr. Wetherill were noted as an example.
- Look at the homestead as the hub of the park, giving the area life and vitality while attracting visitors there, leaving other areas of the park natural.
- The Colonial School District representatives would like a place within the district for environmental education, as they currently travel out of the district to provide students with environmental experiences. They preferred Conceptual Alternatives C and B, and noted there could be unobtrusive points in the park for education.
- Neighbors do not want night use.
- It was noted that the site currently provides habitat for a variety of wildlife to include deer, fox, wild turkeys, quail, black squirrel, turtles, garter snakes, chipmunks, hawks, including a giant heron nest on Mr. Wetherill’s property.
- Aggregate paths were not preferred but are proposed as the main accessible routes in the park.
- There is seasonal flooding along the frontage of Mr. Wetherill’s property at Butler Pike.
- The impact of the park on Maple Acres Farm and their ability to farm successfully was questioned.
- This planning process must consider what the best use of the site is overall. There is no guarantee that the land will be farmed in perpetuity. It is not a best use to design only for farming.

- The concern was expressed that farming is a token in each of the alternatives and the study committee input to date had emphasized the importance of maintaining farming on the site.
- Farming exhibits could be developed simply as signs that would have no or minimal impact on farming activities or as more elaborate displays. The design of the exhibits will be defined as the Township moves into implementation.
- It was questioned why equestrian use was not proposed on any of the alternatives. Mr. Wetherill would like to keep it. The cost of maintaining equestrian use in terms of facilities and specialized personnel was one factor as well as the large area required to provide a viable equestrian facility would encompass a large portion of the site.
- A concern was voiced regarding promoting succession, and with it bringing deer with nuisance issues. Do not promote succession and keep the grasses. By promoting succession the habitat of the site would be enhanced. The function of wooded areas for habitat is promoted when fragmented landscapes are connected and edge conditions are minimized through infill.
- The amount of parking was questioned. Parking will be provided to accommodate the anticipated use. Concerns were voiced about inappropriate activities at remote parking areas.
- There is concern for neighbor privacy.

Conclusions

- The site's agricultural heritage should be maintained and promoted throughout. Maximize the agricultural fields, promoting local produce, and a better understanding of the field to table concept.
- Adaptive re-use of the buildings and structures should be promoted, as practical, to house required park features, retain the setting, and limit the impact on the landscape.
- View sheds throughout the park should be maintained to retain the character of the setting. Neighboring properties should be buffered.
- The natural areas should be enhanced to promote native species, expand habitat, and connect the fragmented landscape.
- Low impact features which accommodate public access without degradation to the resources are appropriate at the site in keeping with the agricultural and natural resource themes.

Pre-Final Master Plan

Guided by the Study Committee discussion of the three conceptual alternatives the Pre-Final Master Plan was developed. The Pre-Final Master Plan is a marriage of the three alternative designs, taking opportunities from each, to create one cohesive plan. The Pre-Final Master

Plan provides expanded opportunities for environmental education, natural resource enhancements, and exploration of the site's natural areas. Passive recreation amenities and activity areas are included within the design.

Guiding Concept – Present the cultural heritage landscape of the region through the retention of farming activities, continued use of farm structures and homestead, and the preservation of natural areas. Retain the natural resources and agricultural areas of the site and explore how man related to the land in the past and could re-connect to the land in the future.

The Pre-Final Master Plan is developed with a balance of agricultural field areas and natural areas. Three fields are retained for agricultural use and other areas are enhanced as natural areas. A pond is introduced into the site for ecological study and as a farm amenity. A nature center is established using the former riding rink as the hub of environmental education on the site. The homestead setting is enhanced as a cultural landscape typical of small farms in the area with gardens, fruit trees, and farm structures.

Passive recreation opportunities are introduced to the site in the form of walking trails and picnic pavilions. The trails are complemented with interpretative signs which highlight the environmental education aspects of the setting. A butterfly habitat area, stream observation platform, and wildlife blind enhance environmental education opportunities.

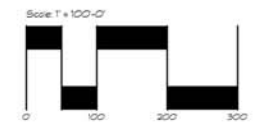
The main access to the environmental hub is from the Butler Pike entrance. Park and drop-off area is located convenient to the nature center. The former barn is converted to programming space and a new maintenance building is located as a typical farm structure.

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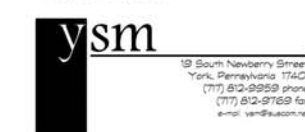
Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- ① Interpretive signage
 - 1. Agriculture
 - 2. Native grasses
 - 3. Farm life



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Harriet Wetherill Park

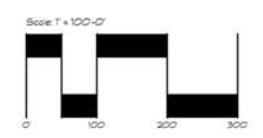
Phase 1 of the Pre-Final Design

Plymouth Township
 Montgomery County
 Pennsylvania
 July 2006



Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- 1 Interpretive signage
 - 1. Agriculture
 - 2. Native grasses
 - 3. Farm life
 - 4. Geology
 - 5. Aquatic life
 - 6. Stream quality
 - 7. Northeast butterflies
 - 8. Montgomery County wildlife



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Harriet Wetherill Park Phase 2 of the Pre-Final Design Plymouth Township Montgomery County Pennsylvania July 2006



Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- ① Interpretive signage
 1. Agriculture
 2. Native grasses
 3. Farm life
 4. Geology
 5. Aquatic life
 6. Stream quality
 7. Northeast butterflies
 8. Montgomery County wildlife
 9. Hedgerow
 10. Meadow



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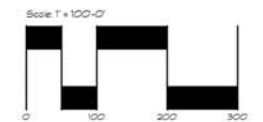


Harriet Wetherill Park Phase 3 of the Pre-Final Design Plymouth Township Montgomery County Pennsylvania July 2006



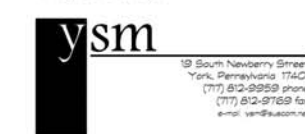
Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- 1 Interpretive signage
 1. Agriculture
 2. Native grasses
 3. Farm life
 4. Geology
 5. Aquatic life
 6. Stream quality
 7. Northeast butterflies
 8. Montgomery County wildlife
 9. Hedgerow
 10. Meadow
 11. Composting
 12. Pond life
 13. Farm to table



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Harriet Wetherill Park

Phase 4 of the Pre-Final Design

Plymouth Township
 Montgomery County
 Pennsylvania
 July 2006

Public Meeting to Review the Pre-Final Master Plan

A public meeting was held on July 24, 2006 to present the Pre-Final Master Plan to the residents and receive input. The meeting agenda provided an overview of the project and work completed to date, and presentation of the Pre-Final Master Plan. Members of the Study Committee, Plymouth Township Council, Plymouth Township Park and Recreation Board, Colonial School District and approximately 15 residents attended the meeting.

The plan was presented in four phases, each building upon the previous phase illustrating how the park improvements could be implemented over time in a logical sequence of construction. The four phases of improvements are illustrated on the following maps.

Phase One has minimal physical improvements, but expands public use and, generates excitement and awareness of the park. Phase Two establishes a more formal entrance to the western side and provides habitat enhancements in the eastern field. Phase Three establishes the nature center hub and area surrounding the indoor riding barn. Phase Four completes the design, establishing the homestead area. The following comments summarize the meeting discussion:

- Motorized vehicles will not be permitted in the park beyond the designated parking areas. The trail system will accommodate access for emergency, maintenance and security vehicles only.
- Equestrian use is not provided for in the park, but it is not prohibited in the initial phases.
- The park boundary and public access onto adjacent properties was raised. The first phase of improvements will include visible boundary designations to alert park users to the property boundary and define private ownership.
- Park security will be undertaken by the Plymouth Township Police Department.
- The park is envisioned as a dawn to dusk facility; however, programming and the development of the nature center may require site lighting to accommodate limited night time use, and provide safe access from the buildings to the parking areas. No lighting is envisioned on the western portion of the site aside from a security light in the pavilion/restroom structure.
- Staffing and long term costs and maintenance must be addressed.
- The mission of the park is to convey the agricultural heritage of the site. Should the current farming operations cease, the Township should consider seeking other farmers interested in maintaining the practice on the site to continue the theme.
- There will not be an entrance fee for the park. Fees may be assessed for programs, special nature center activities, and other special events in the park.
- Although the plan was presented as a four phase project, the total build out may consist of eight or more phases depending on

funding. The phase development could span a 10 to 20 year period.

- Funding will be secured through a variety of sources. Plymouth Township currently collects an impact fee for recreation based on new development. The Township will continue to seek grants from state and federal agencies, and partnerships to offset development costs.
- The pond is seen as a benefit that ties to the agricultural theme however numerous concerns were expressed, as noted below:
 - Expense of construction.
 - Lack of natural water source.
 - Forced, un-natural location.
 - Maintenance.
 - Safety and liability.
 - Effects on water table and surrounding residents utilizing well water.
 - Flooding and the effects on the receiving stream and adjacent properties.
- The pond will require additional study to explore the above concerns and determine its feasibility. The pond could serve as a flood control device and would add a new ecosystem and additional topics for environmental education.
- The representative of the Colonial School District stated the District's support for the project and offered potential for staffing assistance at the nature center.



Chapter 5

Harriet Wetherill Park Master Plan

The Master Plan for Harriet Wetherill Park presents the overall vision for the property, the physical configuration of proposed and existing facilities, and strategies for resource enhancements. The Harriet Wetherill Park Master Plan was developed in its final form after consideration of input from the Study Committee, Plymouth Township representatives, and the general public.

Design Concept

The design of Harriet Wetherill Park highlights the agricultural heritage of the site and emphasizes preservation and stewardship of the site's natural resources. The design accomplishes the following:

- Promotes continuation of the agricultural practices that thrive within the park today. Preserves the farm area as a living exhibit to convey the Township's agrarian heritage for future generations.
- Protects and enhances the site's natural resources and present the park as a landscape for learning.
- Celebrate the native grasses as a legacy to Mr. Wetherill and his work.
- Strengthens and fortifies riparian corridors.
- Develops a nature center to serve as the hub for environmental education for the Township.
- Promotes adaptive reuse of existing structures to accommodate park features, enhancing the park's character and aesthetics.
- Provides opportunity for instructional and self-directed recreation and environmental education.
- Minimizes disturbance of the site's natural features.

Harriet Wetherill Park Improvements

The proposed facilities are developed to promote farming, expand the visitor's understanding of the natural environment and, accommodate the casual outdoor enthusiast. Facilities are provided to enhance the agricultural setting, provide learning landscapes, and natural areas for wildlife and nature observation.

The following narrative describes the improvements and use areas retained and/or proposed for the Harriet Wetherill Park. The map of the Master Plan is provided on page 5-16.

Wetherill Residence, Nature Center and Associated Buildings

The Harriet Wetherill homestead complex includes the main farmhouse, tenant houses, miscellaneous sheds and barns, large indoor equestrian riding rink, fencing, and surrounding landscape. Each structure has been reviewed by the architecture firm of George Donovan AIA and Associates. The results of the review are documented in the

Architectural Assessment found in Appendix A at the end of this report. This 15 acre area is central to the overall park site and has been established as the hub of the park.

The farm exhibit will provide opportunities to explore gardening, farm life, and many other aspects of Plymouth Township's agrarian heritage. The homestead complex is proposed as a landscape exhibit that provides a glimpse into the traditional farm complex typical in the area. An era for the homestead exhibits has not been defined but it should relate to the architecture of the buildings, strengths of the setting, and the history of the site. Proposed improvements to the Wetherill residence and associated buildings include:

Main House

The main house will be retained in the park setting and could have a variety of uses. The master planning process explored re-use of the structure as a caretaker home, intern housing, offices for parks personnel, or as a public meeting area on the first floor for uses associated with the park. If offices or meeting area uses are chosen, the building will require renovation to be accessible for the public. The architectural renovation should be as historically correct as possible, retain the character of the structure, and meet the requirements of the ADA for public access areas. It should be noted; the goal of retaining the homes historic character and obtaining ADA accessibility may not be compatible or may be prohibitively costly.

Barn

The existing barn will be used for park maintenance and storage purposes through the first two stages of park development. During the Capital Investment Stage the barn will transition to provide additional space for park programs. Some renovation of the barn structure will be required to accommodate this public use. The intent is to retain the charm and visual aesthetics of the stables portion of the building while making renovations for programming use. Ideas discussed during the planning process include a studio for nature art and photography, and space for nature crafts and art, and other classes. The apartment and garage would be retained for park storage and other uses.

Nature Center

The area of the existing indoor riding rink is proposed as the location for the nature center building. The existing riding rink structure will be removed and a new building constructed to house nature center activities and exhibits. Throughout most of the planning process it was the intent of Plymouth Township to reuse the indoor riding rink as the nature center. A detailed architectural assessment was performed (see Appendix A) recommending removal of the building due to its' limited useful life span and concerns regarding the economic feasibility of extensive renovations that reuse would require. A new structure would allow flexibility in the buildings size, configuration, and location/orientation on the site. A new

building can take full advantage of green building techniques, if desired, and will be more energy efficient and economical to maintain.

The structure will include restrooms, classroom, and exhibit space. The design of the nature center should be developed with a professional architect with experience in nature center and “green” design projects. Complementary outdoor facilities include a plaza on the building’s west side to serve as a small stage with the barn structure as a backdrop. A small pavilion is situated at the highpoint of the adjacent agricultural field to serve as an outdoor classroom, immersed in the landscape. The design incorporates the existing structure and maximizes use of “green” materials and technology. The plans for the building include:

- Exhibit space.
- Offices space.
- Meeting room.
- Indoor/outdoor education areas.
- Storage of educational materials.
- Restrooms.
- Storage space.

Maintenance Building

A new small maintenance building is proposed central to the residence and nature center. The building will provide storage for park maintenance equipment. The building is situated to anchor the rear yard of the farmhouse, with the garage bays facing east, away from the public eye. The architecture of the building shall compliment the surrounding structures and heritage landscape.

Accessory Buildings

There are several accessory buildings and sheds located throughout the complex. The master plan dictates the removal of the caretaker house, the two run-in sheds, and the open three-sided shed. These structures provide utility to the site and may remain and provide functions for the park until the Capital Investment Stage of park development which will necessitate their removal.

Natural Areas

A variety of natural settings are maintained throughout the park. The natural areas provide a quiet setting for resting and enjoying the plantings and wildlife they attract and a landscape for learning. Natural areas include the following:

Woodlands and Hedgerows

The existing woodlands and hedgerows are maintained and enhanced in the design. The existing wooded areas should be monitored for the presence of non-native, invasive species. Non native, invasive species shall be removed and replaced with native material. The

mature wooded knoll, central to the site, is maintained as a refuse offering quiet isolation.

Riparian Corridor

The strips of land encompassing the Plymouth Creek and its tributaries are maintained and enhanced with riparian buffer plantings. These vegetative buffers are critical to the water quality of the creeks. Mature, native vegetation is maintained, and the width of the riparian corridor should be widened, where possible, to maximize the function of filtering pollutants. Areas adjacent to the creek without filter strips should be planted to establish a sturdy root system. A designated creek observation area is developed northeast of the nature center for convenient access for creek study. The observation platform will provide a controlled, accessible point of access to the creek.

Pennsylvania Grass Meadow

The six acre meadow in the northwest corner of the site (Area F) is maintained as a Pennsylvania grass meadow, featuring native grasses, planted by Mr. Wetherill. The meadow shall be enhanced to promote regeneration of the desired grasses and serve as a demonstration area/arboretum for identification of native grass species. The work of Mr. Wetherill shall be communicated to the public through nature walks and signage to create awareness of the unique landscape.

Cultivated Fields

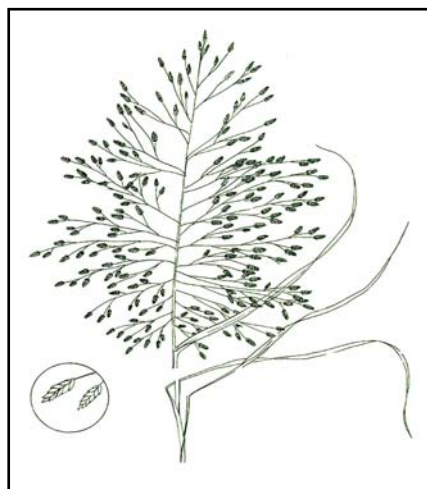
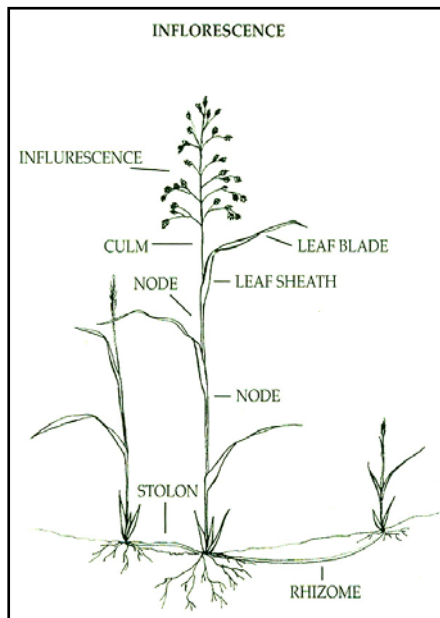
Approximately 34 acres of cultivated fields are proposed to remain as they currently exist in the near-term: an active farm with the land leased by a local farmer. The three designated fields are actively farmed by the tenant farmer for small crop production. These fields shall be maintained in agricultural production to carry the site's heritage into the future.

Home Gardens

An area adjacent to the main residence has been designed with an herb and vegetable garden and fruit trees and shrubs. An arbor structure is introduced, as are walkways to create an intimate garden setting typical of a farm. The gardens will serve as a living exhibit as to how earlier residents live off the land. The gardens will compliment the homestead and reinforce the "field to table" concept.

Natural Area Habitat

The eastern most field will be allowed to naturally succeed to native woodland. This succession is a lengthy process that can serve as an educational tool for years to come. The succession should be monitored regularly to remove invasive species from gaining a foothold in the area. The area should be planted with native species that offer food and shelter for native wildlife. Special areas within the natural area include a butterfly habitat and wild life blinds. The wildlife blinds are envisioned as three-side structures that provide screened viewing of the natural area for watching birds and wildlife.



Purple Love Grass
Eragrostis spectabilis

Picnic Area

A picnic area is proposed at the entrance from Narcissa Road. The picnic area is developed with a combined picnic shelter and restroom facility. The structure should be sized to accommodate small gatherings from 25 to 75 people. The pavilion will provide picnic opportunity and shelter from foul weather for outdoor programs and events.

Trails

A variety of natural trails are developed throughout the park for pedestrian use. Bike use is not anticipated and equestrian use will continue to be accommodated as long as user conflicts do not emerge. It is not anticipated that equestrians will travel to the site to use the trails and house-trailer parking is not accommodated. Where practical, the trails follow the existing equestrian trails navigating the parcels existing clearings and along hedgerows. The majority of the trail system in the northern portion of the park is earthen tread. Aggregate trails are proposed around the large western agricultural field and throughout the farmstead complex. Aggregate trails also connect to the wildlife blind, butterfly habitat and stream observation platform. All trails within the park should comply with the Americans with Disabilities Act Accessibility Guidelines for Outdoor Developed Areas. Wherever trails are developed at the site they should be developed as “sustainable” trails, as defined by the International Mountain Bicycling Association. Sustainable trails:

- Support current and future use with nominal impact to the areas natural systems.
- Produce negligible soil loss or movement while allowing vegetation to inhabit the area
- Recognize that pruning or removal of certain plants may be necessary for proper maintenance.
- Do not adversely affect the area’s wildlife.
- Accommodate existing use while allowing only appropriate future use.
- Require little re-routing and minimal long-term maintenance.

Guidelines for sustainable trail construction can be found in “*Building Better Trails, Designing, Constructing, and Maintaining Outstanding Trails*” published by the International Mountain Bicycling Association. Although trails for mountain biking are not proposed for the Park, the guidelines presented are applicable to development of trails in all natural areas.

Trails must be developed to meet the design requirements of the Americans with Disabilities Act (ADA). The U.S. Architectural and Transportation Barriers Compliance Board adopted specific guidelines for accessibility for natural areas titled: *Recommendations for Accessibility Guidelines: Outdoor Developed Areas*. These guidelines apply to all newly designed and constructed pedestrian trails or altered portions of existing pedestrian trails. They require compliance with the



ADA in Outdoor Setting

The *Recommendations for Accessibility Guidelines: Outdoor Developed Areas* require compliance with the ADA but permit departures from the specific technical provisions where at least one of the following conditions exists:

- Where compliance would cause substantial harm to cultural, historic, religious, or significant natural features or characteristics; or,
- Where compliance would substantially alter the nature of the setting or the purpose of the facility, or portion of the facility; or,
- Where compliance would require construction methods or materials that are prohibited by Federal, state, or local regulations or statutes; or,
- Where compliance would not be feasible due to terrain or the prevailing construction practices.

ADA but permit departures from the specific technical provisions where certain conditions exist. The trails will be designed to accommodate emergency and maintenance vehicles as necessary. Bollards will be located to prohibit access from unauthorized vehicles.

Trail Connections

Montgomery County and Plymouth Township have evaluated trail opportunities to tie the community and region together. Harriet Wetherill Park is located in close proximity to Montgomery County's Cross County Trail. A trail is proposed along the nature center entrance which extends to Butler Pike. A connection should be explored to connect this park trail to the Cross County Trail which would provide access from Plymouth Township to nearby Fort Washington State Park in Whitemarsh Township and the Schuylkill River Trail which extends regionally along the river. The trail extension, location, and crossing of Butler Pike should be coordinated with Whitemarsh Township as well as Montgomery County. The trail connection with the exception of the road crossing is anticipated to be within Whitemarsh Township. A second trail link, from Harriet Wetherill Park to the Greater Plymouth Community Center Park, was suggested in **Plymouth... Naturally!** the 2006 Plymouth Township Park, Recreation and Open Space Plan. A detailed study would be required to safely connect these two park sites and may use both off-road and on-road improvements.

Support Facilities

Entrance/Access and Parking

Three entrances are provided to the Harriet Wetherill Park. The existing entrance from Narcissa Road is extended across the Plymouth Creek, utilizing the existing bridge. The existing aggregate parking area is maintained for overflow parking. The entrance drive terminates in a circular loop for convenient drop-off/pick up. The loop drive extends to a stabilized 48 car parking area.

A new entrance is developed from Butler Pike along the south west boundary line. The entrance will require a new vehicular bridge across the Plymouth Creek. The new drive terminates in a circular drop off and 65 car parking area convenient to the nature center. Half of the parking area is proposed as stabilized pavement for daily visitors, while the balance may be stabilized turf, for days of heavy use. This entrance will be the designated entrance for public access to the nature center and homestead area.

The existing driveway, accessing the residence, is maintained for use by park staff and people using the main house.

Restroom Facilities

A self-composting toilet is suggested at the western picnic pavilion which will not require hook-up to public sewer or water. The restroom location is convenient for visitors accessing the western side of the park.

The nature center should be developed with restrooms that have access from inside the building as well as from the exterior, to accommodate general park users. This restroom should be developed as a modern facility with public sewer and water connections.

Utilities

The main residence is currently served by a private on-lot sewer and water well. These systems will need to be evaluated to determine their adequacy for future use. Sewer and water extensions are required to the nature center. Electric power is required for the nature center, low level security lighting at proposed buildings at each parking area, and along walkways from the parking areas to lighted facilities. Utility extensions into the site will require the crossing of the Plymouth Creek and its tributaries in all cases. Sanitary sewer extension into the site will require a pump to transport sewage below the creek bed.

Site Amenities and Development Considerations

Landscaping

Buffering and naturalization landscaping is proposed for the site due to the natural setting. Landscaping, where proposed, should further the resource protection and environmental education goals of Harriet Wetherill Park to include:

- Expand food and cover for wildlife.
- Facilitate connectivity of vegetative cover.
- Reduce the edge effect of scattered pockets of vegetation which dilute the ecological function and value.
- Buffer sensitive natural resources.
- Improve water quality.
- Enhance settings for environmental education exhibits and programs.
- Mitigate and restore eroded areas, areas of invasive species, or other degraded areas.
- Facilitate the circulation and visitor activities in public use areas.
- Screen adjacent uses.
- Reduce maintenance costs.

Where landscaping is incorporated into the site the use of native plant materials should be promoted. Plant material native to Montgomery County is adapted to the geographic location and, as a result, will require less maintenance, withstand the extremes in climate change, be less susceptible to disease and pests, and propagate naturally. Native plant material will provide needed habitat and food for small mammals and birds. The introduction of native plants and enhancement of natural landscape area will help reduce the opportunity for exotic species to establish a foothold on

the site. Native plant material is readily available from low cost sources such as the Pennsylvania Game Commission.

Meadow

The use of native wild flowers and warm season grasses is recommended throughout the park as shown to provide visual interest, provide cover and food for wildlife, and lower the ongoing maintenance cost of mowing. The use of species native to Montgomery County is suggested. Patience is required when establishing warm season grasses and wildflowers. Many wildflowers will not bloom until their second year of growth. Four to eight-foot wide strips of maintained lawn areas should be provided adjacent to the meadow areas to create a visually pleasing transition to the meadow. Because wildflowers and native grasses have a different appearance in the landscape, it is a good idea to inform park visitors about their use and the landscape and environmental goals for the site. Signs should be placed in the meadows and native grass areas to describe the planting, growing process, and environmental benefits.

Signage System Considerations for Harriet Wetherill Park

A comprehensive signage and wayfinding system is important for Harriet Wetherill Park to guide visitors to the park and inform and direct visitors once they are at the park site. Wayfinding means knowing where you are, knowing your destination, following the best route, recognizing your destination, and finding your way back.¹ As a unique natural area park and a resource for school students, visitors may be traveling from a wide area to visit Harriet Wetherill Park, beyond the boundaries of Plymouth Township. Clear informative signs located along major travel routes will be necessary to guide visitors to the destination.

Once in the park, effective signage must be provided that directs visitors to the park's trails, facilities, and environmental education destinations. "You are here" maps, available at the nature center and kiosks at vehicular drop off areas will greatly aid visitor orientation. A comprehensive system of signs should be developed at Harriet Wetherill Park. The system should incorporate Plymouth Township Park and Recreation Department standard signs such as the park entrance sign and park rules sign. Other signs specific to Harriet Wetherill Park should be designed to complement the standard signs and further the mission of the park.

¹ [Carpman Grant Associates](http://CarpmanGrantAssociates.com), wayfinding.com

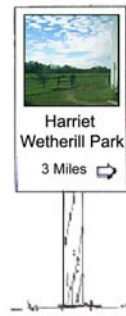
A Signage System for Harriet Wetherill Park		
Sign Type	Sign Purpose	Sign Location
Regional Park Signs	Direct visitors to the park.	Strategic locations along Butler Pike and other local roads that lead to the park.
Park Entrance Signs	Identify the park's main activity areas (Narcissa Road and Butler Pike.)	Entrances to activity areas.
Information Kiosks	Provide information about the park such as park rules and policies, park and trail maps, special events and program calendar, etc.	At activity areas and major trailheads.
Directional Signs	Identify direction and distance to points of interest.	At trailheads and activity area access points.
Trail signs – trail blazes and directional signs	Identify official trails of the park.	At all trail intersections to guide users and identify cross trails.
Mile Markers	Identify location on a trail (mile indication visible from both sides of the marker). Facilitate safety on the trail by providing a trail location system.	At one-half mile intervals along the trails.
Interpretative Signs	Provide environmental education and general interest information.	At points of interest in the park and along the trails.
Park Boundary Bollards/Signs	Identify the park property. (Bollard painted one color on the park side and a second color on the private property side to identify park boundary.)	Along the park boundary line, particularly where roads traverse the park boundary.
Traffic Signs	Warn motorists of park activity areas and trail/road crossings.	Along the entrance drives.
Safety Signs	Warn visitors of safety issues and park rules.	Strategically located as necessary.

The following table offers guidelines for development of signs in a park setting.

Harriet Wetherill Park Sign Guidelines	
Vandal Resistant	Utilize materials such as phenolic resin panels (no frame required) or fiberglass embedded panels (frame required) which resist abrasions, graffiti, solvents, etc.
Weather Resistant	Utilize materials that will not fade or otherwise degrade from sunlight, moisture, or the freeze/thaw cycle.
Meet PennDOT Regulations	Along PennDOT roadways use standard signs.
Promote Consistent Image	Develop a "family" of graphics (logo, font, colors, etc.) that will be used on signs throughout the park to unify the park. Work with professional graphic artists to create a layout template for each sign type and park logo.
Graphics	Utilize maps, graphic illustrations and photographs, and text to communicate the intended message.
Positive Message	Research indicates that positive messages are far more effective in reducing depreciative activities (littering) than negatively worded messages. ²
Sign Illumination	Park identification signs located at the main activity area entrances (Narcissa Road, Butler Pike, etc.) should be illuminated so they are visible at night, fostering awareness of the park.

The sketches on the following page offer typical images of a signage system recommended for Harriet Wetherill Park. Harriet Wetherill Park offers numerous opportunities for learning about the natural, cultural and historic resources of the site. A signage system is recommended highlighting the unique attributes and opportunities offered at Harriet Wetherill Park.

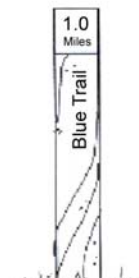
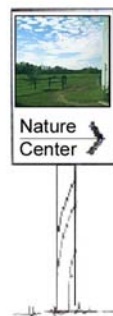
² Recreation Research Update, Pacific Southwest Research Station – Wildland Recreation and Urban Cultures, October 1999 No. 31 (USDA Forest Service).



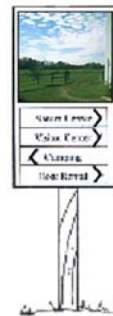
Regional Sign



Boundary Sign



Trail Sign / Mile Marker



Directional Signs



Informational / Interpretive Sign

Signage System Conceptual Sketches

Historic, Cultural and Environmental Education Landscapes and Interpretive Signs

The master plan suggests locations for interpretive outdoor historic, cultural, and environmental education signs. The master plan notes possible themes for each location such as agriculture fields, native grasses, farm life, etc. The site holds many opportunities for environmental education, and cultural landscape stories which will enhance the visitors experience and make Harriet Wetherill Park a premier learning landscape.

Site Furnishings

The developed area of the site should be convenient for users and create a welcoming environment. Benches should be provided at gathering places and periodically along trails. Trash receptacles are recommended at the picnic pavilions, nature center, and at parking areas. Receptacles are not recommended for the natural areas in lieu of a “carry in carry out” policy. Furnishings should consider the needs of seniors and persons with disabilities such as picnic tables that accommodate wheel chairs.

Park Architecture

In addition to the residence and the associated buildings several new structures are proposed for the park. A composting type restroom structure is proposed for the picnic area off of Narcissa Road. The new maintenance building proposed central to the main residence and renovations to the barn will require special attention in selecting material compatible with the existing architecture.

New structures must be accessible and incorporate the requirements of the ADA. Structures should be built with a common vocabulary of unified materials to complement the farmhouse. Architectural guidelines should be developed to guide the development of future buildings and building renovations. Colors, materials, and forms should enhance and blend with the natural setting and promote innovative “green” building initiatives.

Park Architecture Guidelines
Unifying Design – Buildings throughout the site should be similar in design and detail, while responding to function and site characteristics. Building materials should be incorporated in other park elements, i.e., stone used for site walls or sign bases.
Style – The style of building should complement and mimic the main residence and barn structures. Building materials of native rock, wood, and timber framing with an earth tone color pallet that blends with the surrounding landscape should be used, as appropriate.
Aesthetically Pleasing – The buildings should be clean and bright and provide an inviting atmosphere. Well-maintained bathrooms provide an attractive appearance that will encourage visitors to return.
Complement the Setting – The buildings should relate to the topography and character of the setting, becoming an integral part of the site and not forced upon the landscape.
Human Scale – The buildings should be human scale with wide roof overhangs to protect open spaces from the elements.
Vandal Resistant – Interior and exterior materials should be vandal resistant. Restrooms should have vandal resistant fixtures such as stainless steel; pavilion trusses should be closed to public access and bird nesting.
ADA Compliance – Public buildings must comply with the Americans with Disabilities Act requirements.

Stormwater Management

Stormwater facilities will be required to accommodate the stormwater runoff from park improvements. Stormwater, collection, and conveyance facilities shall be designed to comply with the Montgomery County and Plymouth Township Stormwater Management Ordinances. Best Management Practice principles and innovative “green” solutions that promote infiltration and reduce site disturbance should be prioritized.

Sustainability and Green Design Considerations for Park Development

Sustainable Design

Sustainable design is a concept that recognizes human civilization as an integral part of the natural world and nature must be preserved and perpetuated if the human community is to sustain itself indefinitely. Sustainable design is the philosophy that human development should exemplify the principles of conservation, and encourage the application of those principles in our daily lives.³

Sustainability is a widely accepted concept that is often integrated into park development. Sustainability recognizes the impact of human actions on the natural world and promotes actions that align with conservation principles.

Parks present opportunities to demonstrate and share environmental concepts and educate the general public about their role in the environment. Many park sites have embraced the concept of sustainability and have been developed with a sustainable site design approach that incorporates strategies that are ecologically based and compatible with the natural systems of the site. Sustainable park development additionally strives to repair and restore site systems and respect the function and process of the natural world. Andropogon Associates, Ltd developed the “Valdez Principles for Site Design” which promote a sustainable ecological model for site development.³ The principles include:

- Recognition of Context.
- Treatment of Landscapes as Interdependent and Interconnected.
- Integration of the Native Landscape with Development.
- Promotion of Biodiversity.
- Reuse of Already Disturbed Areas.
- Making a Habit of Restoration.

The development of a park site provides an opportunity to incorporate green design techniques and features. Integration of green design principals and products for construction and rehabilitation of park sites is encouraged to minimize the impact on natural resources, promote sustainable development and provide demonstration elements that further public education regarding sustainability and green initiatives. The Green Design Considerations chart on the next page identifies the intent and benefits of incorporating green design principles. Additionally grants and funding sources may look favorably upon the initiatives that incorporation of green design principles.

³ Guiding Principles of Sustainable Design (Denver Services Center: United States Department of the Interior, National Park Service, 1993), p. 41.

Green Design Considerations		
Consideration	Intent	Application
Erosion and sedimentation control	Reduce negative impact on air and water quality	Provide erosion control measures and best management practices (BMP's) during new construction activities. Eliminate impact to steep slope areas.
Reduce site disturbance	Limit development to appropriate sites to reduce the impact on the landscape and habitat.	Construct improvements within existing clearings or developed areas.
Develop sustainable trails	Limit erosion attributed to inappropriate trail placement.	Develop trails that follow the contour of the land. Use switchbacks to navigate steep terrain, where necessary. Eliminate highly erodable trails.
Stormwater management	Limit disruption and pollution of natural water courses, reduce increased runoff and promote infiltration.	Minimize crossings at water courses. Where crossings are necessary, provide measures for efficient passage of water. Utilize porous pavement to promote infiltration of stormwater runoff. Size parking areas to meet park need and provide turf overflow parking for high use occurrences and special events.
Reduce heat islands	Minimize impact of microclimate.	Provide plantings in the large, expansive parking areas to break up the hard surface and promote infiltration. Dawn to dusk policy where appropriate.
Reduce light pollution	Improve night sky visibility and reduce impact on nocturnal environments.	Limit lighting within the park. Where night lighting is necessary for safety and security, provide shields or specify full cut-off fixtures and only specify the necessary lumens.
Innovative wastewater treatment	Reduce the generation of wastewater and potable water demand	Provide self mulching or other environmentally friendly treatment alternatives.
Recycled building materials	Limit the use of consumptive building materials	Utilize recycled plastic and building materials in new construction.
Local materials and suppliers	Support the local economy and reduce the environmental impact resulting from transportation	Purchase products locally produced.
Maximize solar orientation	Reduce electric needs through proper building orientation.	Orient buildings to take advantage of natural light and heat.
Energy consumption	Minimize use of fossil fuels.	Install a ground source geothermal heat pump system for heating and cooling of buildings. Plant deciduous trees to cool buildings in the summer and allow solar access in winter. Layout and orient buildings and outdoor use areas to take advantage of cooling summer breezes. Connect park sites to regional trail systems so non-motorized transportation modes can be used to access the site. Install solar powered amenities/features.
Promote water conservation	Reduce water use to lower burden on supply.	Select native and drought tolerant plants to reduce watering and maintenance demands. Mulch landscape areas to retain moisture and minimize water needs.
Use water efficiently	Maximize water collection to reduce burden on supply.	Collect rainwater and runoff in rain barrels for watering landscaping and maintenance needs. Direct rainwater to rain gardens to promote groundwater recharge. Use high efficiency fixtures and composting toilets to reduce demand. Use re-circulating and water treatment systems for splash pads and spray features.
Emphasize and promote recycling	Reduce the amount of new materials required and lower the demand for new materials to be produced.	Reuse existing buildings, materials and infrastructure. Build with salvaged materials whenever available.
Participate in LEED system.	Employ the Leadership in Energy and Environmental Design (LEED) Green Building Rating System on site as the national standard for Green Design.	Use the LEED project checklist for all aspects of design from erosion & sedimentation control to green power, and materials.

A site's natural resources are valuable assets and should be protected. Development and rehabilitation of parks typically involves earthwork and construction activities. Best Management Practices are encouraged throughout the construction process to protect the resources and stabilize them through creative design. Best Management Practices will promote a stable future for the site. Examples of Best Management Practices are noted below.

Best Management Practices		
BMP	Purpose	Application
Constructed treatment wetlands	Remove a wide variety of pollutants such as suspended solids, nutrients, and organic pollutants.	Shallow water-filled basins planted with emergent plant vegetation. Place at stream/drainage-way outfall to water bodies.
Critical area planting	Stabilize slope, improve wildlife habitat, slow storm water run-off	Areas of erodible soils and/or steep slope and at the edge of the stream and perimeter of pond.
Filter strip	To trap sediment and convey run-off from paved surfaces to storm water channels and reduce run-off velocity	Adjacent to impervious surfaces and on gentle slopes with sheet flow. Adjacent to springs, streams, and ponds to filter sediment.
Grass swales	Run-off conveyance, pollution, and sediment filtering device and increased ground water infiltration.	Where natural drainage ways can be incorporated into the storm water design in lieu of piped conveyance.
Level spreader	To reduce the erosion effects of concentrated run-off and promote infiltration	Adjacent to paved surfaces and at pipe and channel discharge points.
Stream bank stabilization	Protect critical sections of a stream bank where standard vegetative practices are not feasible or offer insufficient protection.	Banks of springs, streams or swales that need to be stabilized due to unstable soil and steep banks.
Minimize site clearing	Minimize disruption to the site's natural systems and preserve the natural stabilizing and filtering vegetation of the site.	Where development is proposed.
Reduce impervious infrastructure	Reduce storm water run-off and promote infiltration.	Where development is proposed. Reduce driveway width, parking area dimensions, and paved areas to minimum dimensions. Utilize coarse aggregate porous surface in lieu of impervious pavement. Utilize stabilized turf for overflow parking.
Best management plan for construction activities	To prevent soil erosion, sediment, and other pollutants from entering springs, streams, ponds, etc.	Where development is proposed. Utilize during construction and post- construction period.



Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- 1 Interpretive signage
 - 1. Agriculture
 - 2. Native grasses
 - 3. Farm life
 - 4. Geology
 - 5. Aquatic life
 - 6. Stream quality
 - 7. Northeast butterflies
 - 8. Montgomery County wildlife
 - 9. Hedgerow
 - 10. Meadow
 - 11. Composting
 - 12. Farm to table



Prepared for:
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 Community Center
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 Plymouth Meeting, PA 19462



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RETTEW ASSOCIATES, INC.

Harriet Wetherill Park Master Plan

Plymouth Township
 Montgomery County
 Pennsylvania
 February 2007



Chapter 6

Cost and Implementation Analysis

Harriet Wetherill Park Cost and Implementation Analysis

Harriet Wetherill Park will be an investment in the recreation and environmental educational opportunities for residents of Plymouth Township. These opportunities will require the investment of significant capital expenditures and dedication of Township staff to realize the vision established in this master plan. The development of Harriet Wetherill Park will occur in phases over several years. To guide the development of the park, cost estimates have been prepared to correspond to proposed development phases.

The following information outlines the proposed implementation/phasing plan for development of Harriet Wetherill Park based on the master plan. Three stages of implementation are recommended as follows:

- Early Implementation Stage
- Initial Public Use Stage
- Capital Investment Stage

Early Implementation Stage

This stage of development includes four specific tasks that respond to the planned expansion of public use at the Harriet Wetherill Park site: 1) identifying the property limits with property line boundary markers and signs, 2) removal of invasive non-native species, 3) implementing a buffering and naturalization plan, and 4) installing an entry sign at the Narcissa Road entrance and an information kiosk along the trail to post information about use of the park.

The boundary markers and signs will inform park visitors to the limits of the park site and likewise alert neighbors to the property line and allow any encroachments to be addressed.

Throughout the site, but particularly along the property boundaries, invasive species have gotten a strong foothold on the site. These vegetative species are not native to the area and are detrimental to the natural resources of the site, crowding out native plant species and spreading prolifically. An eradication program should be started to eliminate invasive plant species and replant affected areas with native vegetation.

A buffering and naturalization plan will provide a planting plan for buffers along the park property lines, where necessary, enhancing the site with native grasses and wildflowers where proposed in the master plan, and introducing native plant material where invasive species have been removed. The planting plan will design a vegetative buffer for areas of the park that are open or partially visible to neighboring properties. Buffering along the parks boundary was requested by many of the park neighbors throughout the master planning process. Enhancing areas of the site with naturalized native grasses and wildflowers will provide

wildlife habitat, provide environmental educational areas for programs (future), and lower maintenance requirements by reducing lawn areas.

Breaking these tasks out separately from the other phases of park development will further the good relationship the municipality has with its neighbors, prepare the park site for expanded public use, and target available grant opportunities for plant material and natural resource enhancements. Each year the Montgomery County Conservation District has a seedling sale of native plant material which could be used, in part, to implement the naturalization plan.

These tasks can be completed by either municipal work forces or through contracted services. When municipal work forces schedules and planting seasonal schedules align it may be possible for portions of the work proposed in the Early Implementation Stage to be completed by the municipality. Using contracted services may be necessary when scheduling conflicts occur and if municipal work forces availability is limited by their ongoing responsibilities. Additionally, there may be efficiencies to using contracted services to complete these improvements at one time versus sporadically over a longer period of time necessitated by fitting the work into the municipal work schedule.

Also included in this stage of implementation are the professional fees for the design, engineering, and permitting for the Initial Public Use Stage improvements. The construction documents for development of this second stage will occur while the Early Implementation Stage tasks are underway.

Initial Public Use Stage

The Initial Public Use Stage includes the first two phases of developing Harriet Wetherill Park. The improvements in Phases 1 and 2 will provide amenities for visitor use and provide a trail system throughout a large portion of the park. Individuals, families, and small groups will enjoy visiting the park during this stage of development to stroll along the nature trails, explore the native grasses and natural areas, and spend time in the scenic outdoor setting.

Capital Investment Stage

The major investment in the property occurs in the Capital Investment Stage which includes Phases 3 and 4. This stage of development could be separated into more than two phases but for planning purposes two phases have been identified. Phase 3 includes the development of the nature center building and Phase 4 is the renovation and introduction of amenities to the homestead area. These facilities will accommodate school classes and other groups interested in nature and environmental education, as well as residents participating in programs and agricultural and nature activities.

Implementation Strategies

Dividing the project into the suggested three stages will allow a varied implementation strategy for each stage. Although municipal work forces may be able to complete the tasks defined in the Early Implementation Stage, the Initial Public Use and Capital Investment Stages will require detailed design and engineering construction documents for public bidding. Moving ahead initially with the Early Implementation Stage will complete necessary improvements to the park site while grants are sought and design and engineering construction documents prepared for the Initial Public Use Stage. Grants would also be sought for the phases of the Capital Investment Stage and a capital fundraising campaign for these major investments may also be undertaken.

Cost estimates (pages 6 - 7) prepared for each phase of park development are summarized as follows:

Early Implementation Stage

Buffering and Naturalization Plan..... \$221,382

Initial Public Use Stage

Phase 1..... \$228,907

Phase 2..... \$402,512

Sub-total Initial Public Use Stage..... \$631,419

Capital Investment Stage

Phase 3..... \$4,162,761

Phase 4..... \$863,338

Sub-total Capital Investment Stage ... \$5,026,099

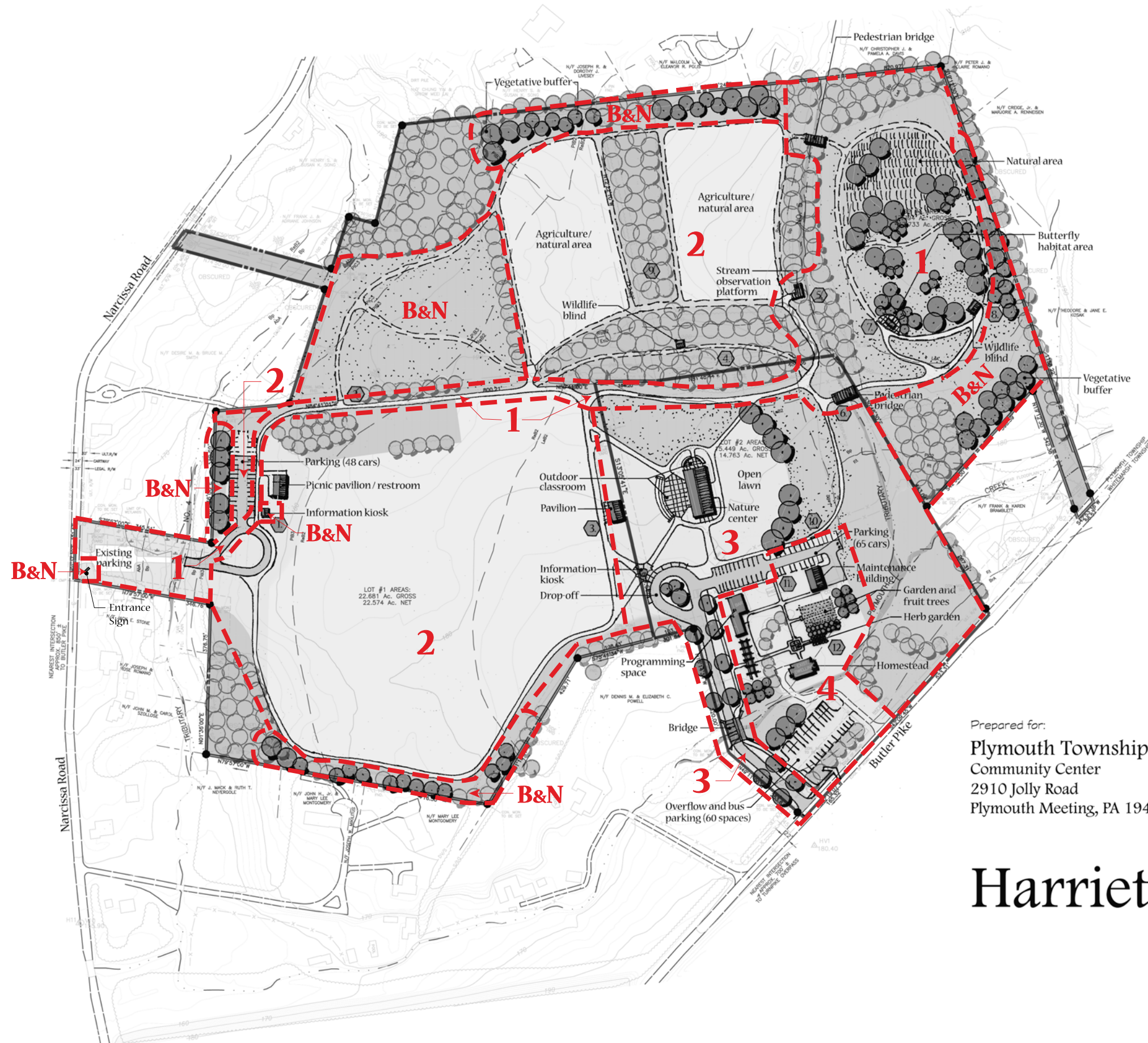
Total \$5,878,900

Implementation Tasks

The creation of the park as depicted on the final master plan will require numerous approvals and permits. The following list outlines the implementation tasks that may be required for development of Harriet Wetherill Park. This list is provided for planning purposes and additional tasks, approvals, and permits may be required.

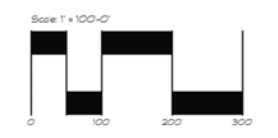
- Prepare land development plans for submission and review by Plymouth Township and Montgomery County, as required.
- Complete environmental permits for the proposed improvements that will impact waters of the Commonwealth. Improvements such as bridges and observation areas crossing or impacting the tributaries must be permitted.
- Develop construction documents utilizing the boundary and topographic survey. Construction documents shall detail and engineer the proposed improvements and associated amenities. Engineering shall include structural design of bridges, culverts, railings, and pavements; traffic studies; architectural renovations; site amenities and signage; and miscellaneous site improvements. Prepare a project manual including specifications for bidding.

- Prior to construction, Plymouth Township must obtain approvals from the various governing agencies. The following is a listing of typical approvals for a development of this nature but may not be all-inclusive.
 - Municipal and County approval for land development plans, if required.
 - Montgomery County Conservation District approval for erosion and sedimentation control plans and NPDES Permit.
 - Pennsylvania Department of Transportation approval for any work within a PennDOT right-of-way.
 - Pennsylvania Department of Environmental Protection approval for any work within the waters of the Commonwealth including delineated wetlands and stream encroachments and crossings.
 - Water well testing for quantity and potable water.
 - Pennsylvania Department of Environmental Protection for sewage planning module approval.
 - On lot testing for septic field suitability for sewer expansion or for proposed restrooms facilities, unless a self-composting restroom or public sewer are utilized.
 - Pennsylvania One Call. Pennsylvania law requires three working days notice for construction phase and ten working days in design stage.
 - Approval from public utilities required for development such as sewer, water, and electric service extensions.
- Each of the above permits and approval are typically involved and will require advance planning to facilitate the process. Adequate preparation and review time should be allotted.
- Upon approval of all required approvals and permits and completion of the construction documents, the project should be publicly bid for construction.



Legend

- Boundary markers
- Soft-surfaced trail
- Aggregate trail
- Stream
- Agricultural field
- Meadow
- Lawn
- 1. Interpretive signage
 - 1. Agriculture
 - 2. Native grasses
 - 3. Farm life
 - 4. Geology
 - 5. Aquatic life
 - 6. Stream quality
 - 7. Northeast butterflies
 - 8. Montgomery County wildlife
 - 9. Hedgerow
 - 10. Meadow
 - 11. Composting
 - 12. Farm to table



Prepared for:
 Plymouth Township
 Community Center
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Prepared by:



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Harriet Wetherill Park Phasing Plan

Plymouth Township
 Montgomery County
 Pennsylvania

November 2006

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
BUREAU OF RECREATION AND CONSERVATION

COMMUNITY CONSERVATION PARTNERSHIP PROGRAM

DEVELOPMENT APPLICATION ESTIMATE OF PROBABLE COST

**Harriet Wetherill Park
Buffering and Naturalization Plan**

Applicant Plymouth Township
Project No. 05PLY-01

Date Prepared 11/9/2006
Prepared By: AEY

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	Site Amenities			\$0.00
	A. Property Boundary Markers	0 EA	\$150.00	\$0.00
2	Landscaping/Invasive Plant Removal			\$95,525.00
	A. Deciduous Tree	33 EA	\$350.00	\$11,550.00
	B. Flowering/Accent Tree	36 EA	\$275.00	\$9,900.00
	C. Evergreen Tree	35 EA	\$275.00	\$9,625.00
	D. Shrub	80 EA	\$80.00	\$6,400.00
	E. Native Grass/ Wildflower Seeding/Invasive Plant Removal	387,000 SF	\$0.15	\$58,050.00
4	Signage			\$10,000.00
	A. Entrance Sign	1 EA	\$5,000.00	\$5,000.00
	B. Information Kiosk	1 EA	\$5,000.00	\$5,000.00
3	Professional Fees			\$86,981.25
	A. Buffering and Naturalization Plan	1 LS	\$15,828.75	\$15,828.75
	B. Phase 1	1 LS	\$25,794.75	\$25,794.75
	C. Phase 2	1 LS	\$45,357.75	\$45,357.75
5	Contingency			\$28,875.94
	A. 15% Contingency	1 LS	\$28,875.94	\$28,875.94
	Total			\$221,382

Cost estimate does not include stormwater or erosion and sediment control measures,

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
BUREAU OF RECREATION AND CONSERVATION

COMMUNITY CONSERVATION PARTNERSHIP PROGRAM

DEVELOPMENT APPLICATION ESTIMATE OF PROBABLE COST

Harriet Wetherill Park

Phase 1

Applicant Plymouth Township
Project No. 05PLY-01

Date Prepared 11/9/2006
Prepared By: AEY

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	Earthwork			\$11,700.00
	A. Strip and Replace Topsoil	1,400 CY	\$3.00	\$4,200.00
	B. Earthmoving Activities	3,000 CY	\$2.50	\$7,500.00
2	Stormwater and E&S Control Measures			\$35,000.00
	A. Silt Fence/Construction Fence	1,500 LF	\$4.00	\$6,000.00
	B. Swales	1500 LF	\$8.00	\$12,000.00
	C. Stabilized Construction Entrance	1 EA	\$1,000.00	\$1,000.00
	D. Misc E&S controls	1 LS	\$8,000.00	\$8,000.00
	E. Misc Stormwater Management Controls	1 LS	\$8,000.00	\$8,000.00
3	Pavements			\$45,000.00
	A. 8' Wide Aggregate trail (2,800 lf)	2,500 SY	\$18.00	\$45,000.00
4	Structures			\$64,000.00
	A. Pedestrian Bridge/Creek Crossing	2 LS	\$16,000.00	\$32,000.00
	B. Boardwalks/Accessible Pier	120 SF	\$50.00	\$6,000.00
	C. Butterfly Garden and Plantings	1 LS	\$11,000.00	\$11,000.00
	D. Wildlife Blind	1 LS	\$15,000.00	\$15,000.00
5	Site Amenities			\$0.00
	A. Benches	0 EA	\$1,200.00	\$0.00
	B. Trash Receptical	0 EA	\$1,200.00	\$0.00
	C. Picnic Tables	0 EA	\$1,400.00	\$0.00
	D. Pet Waste Disposal System	0 EA	\$350.00	\$0.00
6	Signage			\$5,600.00
	A. Interpretive Signage Station	3 EA	\$1,200.00	\$3,600.00
	B. Directional Signage/Mile Markers	5 EA	\$400.00	\$2,000.00
7	Landscaping			\$10,665.00
	A. Flowering/Accent Tree	3 EA	\$275.00	\$825.00
	B. Shrub	7 EA	\$80.00	\$560.00
	C. Lawn Seeding	48500 SF	\$0.08	\$3,880.00
	D. Native Grass/ Wildflower Seeding	36,000 SF	\$0.15	\$5,400.00
8	Professional Fees			\$6,448.69
	A. Design, Engineering, Permitting - 15%	1 LS	\$25,794.75	\$25,794.75
	B. Subtract Design, Eng., Permitting - in B and N Phase	1 LS	(\$25,794.75)	(\$25,794.75)
	C. As Built Survey, Construction Docs and Bidding	1 LS	\$6,448.69	\$6,448.69
9	Bond, Mobilization, and Layout			\$20,635.80
	A. Bond, Mobilization, and Layout (12%)	1 LS	\$20,635.80	\$20,635.80
10	Contingency			\$29,857.42
	A. 15% contingency	1 LS	\$29,857.42	\$29,857.42
	Total			\$228,907

Cost estimate does not include interpretive signage design/feature design, earthen trail development, and construction inspection fees.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
BUREAU OF RECREATION AND CONSERVATION

COMMUNITY CONSERVATION PARTNERSHIP PROGRAM

DEVELOPMENT APPLICATION ESTIMATE OF PROBABLE COST

Harriet Wetherill Park

Phase 2

Applicant Plymouth Township
Project No. 05PLY-01

Date Prepared 11/9/2006
Prepared By: AEY

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	Earthwork			\$10,000.00
	A. Strip and Replace Topsoil	1,250 CY	\$3.00	\$3,750.00
	B. Earthmoving Activities	2,500 CY	\$2.50	\$6,250.00
2	Stormwater and E&S Control Measures			\$30,800.00
	A. Silt Fence/Construction Fence	1,500 LF	\$4.00	\$6,000.00
	B. Temporary Diversion Swale	600 LF	\$8.00	\$4,800.00
	C. Stabilized Construction Entrance	1 EA	\$1,000.00	\$1,000.00
	D. Misc E&S controls	1 LS	\$7,000.00	\$7,000.00
	E. Misc. SWM controls	1 LS	\$12,000.00	\$12,000.00
3	Pavements			\$104,900.00
	A. 8' Wide Aggregate trail (2,400 lf)	2,150 SY	\$18.00	\$38,700.00
	B. Bituminous Access drive and parking- Narcissa Road	2,200 SY	\$25.00	\$55,000.00
	C. Concrete	1,600 SF	\$7.00	\$11,200.00
4	Structures			\$105,000.00
	A. Picnic Pavilion (24'x36') w/ Self Composting Restroom	1 LS	\$90,000.00	\$90,000.00
	B. Wildlife blind at central highpoint, optional	1 LS	\$15,000.00	\$15,000.00
5	Site Amenities			\$12,000.00
	A. Benches	0 EA	\$1,200.00	\$0.00
	B. Trash Receptical	0 EA	\$1,200.00	\$0.00
	C. Picnic Tables	0 EA	\$1,400.00	\$0.00
	D. Pet Waste Disposal System	0 EA	\$350.00	\$0.00
	E. Fencing to define drop off and parking areas	300 LF	\$40.00	\$12,000.00
6	Signage			\$8,000.00
	A. Interpretive Signage Station	5 EA	\$1,200.00	\$6,000.00
	B. Directional Signage/Mile Markers	5 EA	\$400.00	\$2,000.00
7	Site Lighting			\$25,000.00
	A. Parking Area Lights at Narcissa Rd. (Assume 6 poles)	1 LS	\$20,000.00	\$20,000.00
	B. Security Lights at Picnic pavilion/restroom	1 LS	\$5,000.00	\$5,000.00
	C. Electric Distribution (Unable to determine at this time)	1 LS	\$0.00	\$0.00
8	Landscaping			\$6,685.00
	A. Deciduous Tree	3 EA	\$350.00	\$1,050.00
	B. Flowering/Accent Tree	3 EA	\$275.00	\$825.00
	C. Shrub	15 EA	\$80.00	\$1,200.00
	D. Lawn Seeding	32,000 SF	\$0.08	\$2,560.00
	E. Native Grass/ Wildflower Seeding	7,000 SF	\$0.15	\$1,050.00
9	Professional Fees			\$11,339.44
	A. Design, Engineering, Permitting - 15%	1 LS	\$45,357.75	\$45,357.75
	B. Subtract Design, Eng., Permitting - in B and N Phase	1 LS	(\$45,357.75)	(\$45,357.75)
	C. As Built Survey, Construction Docs and Bidding	1 LS	\$11,339.44	\$11,339.44
10	Bond, Mobilization, and Layout			\$36,286.20
	A. Bond, Mobilization, and Layout (12%)	1 LS	\$36,286.20	\$36,286.20
11	Contingency			\$52,501.60
	A. 15% contingency	1 LS	\$52,501.60	\$52,501.60
	Total			\$402,512

Cost estimate does not include stormwater detention/retention facilities, any utility connection fees, utility location and/or relocation, electrical design and engineering, electric distribution throughout the site, sewer and water design and engineering, interpretive signage/feature design, and construction inspection fees.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
BUREAU OF RECREATION AND CONSERVATION

COMMUNITY CONSERVATION PARTNERSHIP PROGRAM

DEVELOPMENT APPLICATION ESTIMATE OF PROBABLE COST

Harriet Wetherill Park

Phase 3

Applicant **Plymouth Township**
Project No. **05PLY-01**

Date Prepared **10/20/2006**
Prepared By: **CJS**

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	Site Preparation and Demolition			\$5,000.00
	A. Selective structure removal	1 LS	\$5,000.00	\$5,000.00
2	Earthwork			\$45,000.00
	A. Strip and Replace Topsoil	5,000 CY	\$3.00	\$15,000.00
	B. Earthmoving Activities	12,000 CY	\$2.50	\$30,000.00
3	Stormwater and E&S Control Measures			\$47,800.00
	A. Silt Fence/Construction Fence	1,000 LF	\$4.00	\$4,000.00
	B. Temporary Diversion Swale	600 LF	\$8.00	\$4,800.00
	C. Stabilized Construction Entrance	1 EA	\$1,000.00	\$1,000.00
	D. Misc E&S controls	1 LS	\$16,000.00	\$16,000.00
	E. Misc SWM controls	1 LS	\$16,000.00	\$16,000.00
	F. Sediment Trap	1 LS	\$6,000.00	\$6,000.00
4	Pavements			\$208,980.00
	A. 8' Wide Aggregate trail (1,900 lf)	1,700 SY	\$18.00	\$30,600.00
	B. Bituminous Access drive and parking-Butler	4,200 SY	\$25.00	\$105,000.00
	C. Stabilized Lawn for Overflow Parking	1,580 SY	\$11.00	\$17,380.00
	D. Concrete	8,000 SF	\$7.00	\$56,000.00
5	Structures			\$2,355,000.00
	A. Picnic Pavilion (24'x36')	1 LS	\$35,000.00	\$35,000.00
	B. Vehicular Bridge at Creek Crossing from Butler Pike	1 LS	\$160,000.00	\$160,000.00
	C. Nature Center Building Allowance	1 LS	\$2,160,000.00	\$2,160,000.00
6	Site Amenities			\$86,100.00
	A. Benches	6 EA	\$1,200.00	\$7,200.00
	B. Trash Receptical	4 EA	\$1,200.00	\$4,800.00
	C. Picnic Tables	6 EA	\$1,400.00	\$8,400.00
	D. Pet Waste Disposal System	2 EA	\$350.00	\$700.00
	E. Outdoor Education Area Allowance	1 LS	\$15,000.00	\$15,000.00
	F. Fencing to define drop off and parking areas	500 LF	\$40.00	\$20,000.00
	G. Custom Interpretive Feature allowance	1 LS	\$30,000.00	\$30,000.00
7	Signage			\$14,000.00
	A. Entrance Sign	1 EA	\$5,000.00	\$5,000.00
	B. Information Kiosk	1 EA	\$5,000.00	\$5,000.00
	C. Interpretive Signage Station	2 EA	\$1,200.00	\$2,400.00
	D. Directional Signage/Mile Markers	4 EA	\$400.00	\$1,600.00
8	Site Lighting			\$32,000.00
	A. Parking Area Lights at Butler Pike (Assume 6 poles)	1 LS	\$20,000.00	\$20,000.00
	B. Walkway Lights from NC to parking area	1 LS	\$12,000.00	\$12,000.00
	C. Electric Distribution (Unable to determine at this time)	1 LS	\$0.00	\$0.00
9	Landscaping			\$56,350.00
	A. Deciduous Tree	20 EA	\$350.00	\$7,000.00
	B. Flowering/Accent Tree	15 EA	\$275.00	\$4,125.00
	C. Evergreen Tree	3 EA	\$275.00	\$825.00
	D. Shrub	30 EA	\$80.00	\$2,400.00
	E. Lawn Seeding	150,000 SF	\$0.08	\$12,000.00
	F. Native Grass/ Wildflower Seeding	200,000 SF	\$0.15	\$30,000.00
10	Professional Fees			\$427,534.50
	A. Design, Engineering, and Permitting (15%)	1 LS	\$427,534.50	\$427,534.50

11	Bond, Mobilization, and Layout A. Bond, Mobilization, and Layout (12%)	1 LS	\$342,027.60	\$342,027.60 \$342,027.60
12	Contingency A. 15% contingency	1 LS	\$542,968.82	\$542,968.82 \$542,968.82
	Total			\$4,162,761

Cost estimate does not include stormwater detention/retention facilities, Butler Pike or Narcissa Road improvements or permits, any utility connection fees, utility location and/or relocation, electrical design and engineering, Electric Distribution throughout the site, sewer and water design and engineering, interpretive signage design, custom interpretive feature design, soft surface trail development and construction inspection fees.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
BUREAU OF RECREATION AND CONSERVATION

COMMUNITY CONSERVATION PARTNERSHIP PROGRAM

DEVELOPMENT APPLICATION ESTIMATE OF PROBABLE COST

Harriet Wetherill Park

Phase 4

Applicant Plymouth Township
Project No. 05PLY-01

Date Prepared 10/20/2006
Prepared By: CJS

Item No.	Work Item	No. of Units	Unit Cost	Total Cost
1	Site Preparation and Demolition			\$15,000.00
	A. Selective structure removal	1 LS	\$5,000.00	\$5,000.00
	B. Tennis court and pool removal	1 LS	\$10,000.00	\$10,000.00
2	Earthwork			\$4,750.00
	A. Strip and Replace Topsoil	750 CY	\$3.00	\$2,250.00
	B. Earthmoving Activities	1,000 CY	\$2.50	\$2,500.00
3	Stormwater and E&S Control Measures			\$16,000.00
	A. Silt Fence/Construction Fence	1,100 LF	\$4.00	\$4,400.00
	B. Temporary Diversion Swale	700 LF	\$8.00	\$5,600.00
	C. Stabilized Construction Entrance	1 EA	\$1,000.00	\$1,000.00
	D. Misc E&S controls	1 LS	\$2,000.00	\$2,000.00
	E. Misc SWM Controls	1 LS	\$3,000.00	\$3,000.00
4	Pavements			\$9,100.00
	A. 5' Wide Aggregate trail (600 lf)	350 SY	\$18.00	\$6,300.00
	B. Concrete	400 SF	\$7.00	\$2,800.00
5	Structures			\$510,000.00
	A. Residence Renovation Allowance	1 LS	\$210,000.00	\$210,000.00
	B. Barn Renovation Allowance	1 LS	\$150,000.00	\$150,000.00
	C. Maintenance Building	1 LS	\$150,000.00	\$150,000.00
6	Site Amenities			\$7,550.00
	A. Benches	4 EA	\$1,200.00	\$4,800.00
	B. Trash Receptical	2 EA	\$1,200.00	\$2,400.00
	C. Picnic Tables	- EA	\$1,400.00	\$0.00
	D. Pet Waste Disposal System	1 EA	\$350.00	\$350.00
7	Signage			\$3,200.00
	A. Interpretive Signage Station	2 EA	\$1,200.00	\$2,400.00
	B. Directional Signage/Mile Markers	2 EA	\$400.00	\$800.00
8	Site Lighting			\$8,000.00
	A. Walkway Lights	1 LS	\$8,000.00	\$8,000.00
	B. Electric Distribution (Unable to determine at this time)	1 LS	\$0.00	\$0.00
9	Landscaping			\$17,525.00
	A. Deciduous Tree	6 EA	\$350.00	\$2,100.00
	B. Flowering/Accent Tree	12 EA	\$275.00	\$3,300.00
	C. Evergreen Tree	3 EA	\$275.00	\$825.00
	D. Shrub	25 EA	\$80.00	\$2,000.00
	E. Herb, vegetable and fruit tree allowance	1 LS	\$6,000.00	\$6,000.00
	F. Lawn Seeding	30,000 SF	\$0.08	\$2,400.00
	G. Native Grass/ Wildflower Seeding	6,000 SF	\$0.15	\$900.00

10	Professional Fees A. Design, Engineering, and Permitting (15%)	1 LS	\$88,668.75	\$88,668.75 \$88,668.75
11	Bond, Mobilization, and Layout A. Bond, Mobilization, and Layout (12%)	1 LS	\$70,935.00	\$70,935.00 \$70,935.00
12	Contingency A. 15% contingency	1 LS	\$112,609.31	\$112,609.31 \$112,609.31
	Total			\$863,338

Cost estimate does not include stormwater detention/retention facilities, Butler Pike or Narcissa Road improvements or permits, any utility connection fees, utility location and/or relocation, electrical design and engineering, Electric Distribution throughout the site, sewer and water design and engineering, interpretive signage design, custom interpretive feature design, soft surface trail development and construction inspection fees.

YSM is not a construction contractor and therefore probable construction cost opinions are based solely upon our experience with construction. This requires YSM to make a number of assumptions as to actual conditions which will be encountered on the site; the specific decisions of other design professionals engaged; the means and methods of construction the contractor will employ; contractors' techniques in determining prices and market conditions at the time, and other factors over which YSM has no control. Given these assumptions which must be made, YSM states that the above probable construction cost opinion is a fair and reasonable estimate for construction costs.



Chapter 7

Operations, Budget and Management

Introduction

Plymouth Township has made the monumental achievement of the preservation of one of the last remaining agricultural and natural areas of the community. Through the generosity of Elkins Wetherill and the support of the Montgomery County Green Fields/Green Towns program, the Township was able to acquire 55 acres of land to be used for conservation, nature based recreation and environmental education. The Larkin tract with an additional 12 acres of natural area adjoins this property. The Township's vision is to conserve this property as a cultural heritage landscape featuring the homestead, buildings, agricultural areas, meadows and hedgerows. Of great importance is the conservation of the grasses and significant plant species. This will help to retain the wildlife of the site as well. Wildlife includes: wild turkeys, deer, fox, many species of birds, squirrels, chipmunks, fox and others.

Harriet Wetherill Park introduces an entirely different type of park to the Plymouth Township parks and recreation system, one rooted in the conservation of the natural and cultural environment along with responsible public use. In contrast to the other parks which are manicured in response to public expectations as well as maintained mainly for active recreation, Harriet Wetherill Park requires a completely new approach to park management and operation.

Harriet Wetherill Park: A Hybrid Park in Plymouth Township

Harriet Wetherill Park is a hybrid park in Plymouth Township: a cross between the traditional township parks and Greater Plymouth Community Center. The Township parks are operated as self-directed, drop-in facilities in which individuals and organizations create their own activities and events. Greater Plymouth Community Center, which offers drop in recreation facilities, is also a destination with scheduled programs and activities that produce a higher level of service and generate revenues through user fees. As a hybrid park, Harriet Wetherill Park will be open for drop-in park use AND serve as a destination site for organized, scheduled environmental programs.

Harriet Wetherill Park will generate revenues through user fees and charges for programs and services. The primary means of operating this facility will be through an extensive volunteer program.

Purpose of the Operations and Management Plan

Plymouth Township has wisely chosen to plan for the operation and management of Harriet Wetherill Park during the master planning process. Advance planning will help to insure that Harriet Wetherill Park will be conserved as a safe, clean, attractive community destination, reflecting the values and resources of the community and the legacy of the Wetherill family.

Maintenance is the single largest recurring expenditure in parks and recreation. Over the lifetime of a park, about 75 percent of its cost is in

maintenance while only about 25 percent is in acquisition, development, design and construction (Lay, 1978).¹

This operations and maintenance plan sets forth a strategy for managing Harriet Wetherill Park as it is developed over the next ten years and beyond. The plan should serve as a working document to be used, based upon the history of park management and revised as Harriet Wetherill Park is improved through the phases proposed. Recreation opportunities and maintenance functions will be addressed in this chapter.

Public Opinion about Harriet Wetherill Park Use and Facilities

A major factor in the successful operation and management of parks is the level of public support. The Township has been assessing public recreation needs for the last several years through this project as well as in the Comprehensive Park, Recreation and Open Space Plan, **Pathways to the Future**, and its update, **Plymouth... Naturally!** The assessment included key person interviews, focus groups, public meetings, and a citizens' study committee for each project. In addition, the Parks & Recreation Department conducted public opinions surveys. The survey included a specific question regarding preferred public uses and facilities in Harriet Wetherill Park. Table 7-1 presents the findings from this question. In another question, respondents were asked to indicate where they thought the Township should focus its parks and recreation efforts in the future. About 70 percent of the survey respondents stated that open space and natural resource conservation should be that future focus. Walking paths emerged as the most preferred facility in Harriet Wetherill Park by seven out of ten of the survey respondents.

¹ Lay, Francis. 1978. Management of Grounds or Site Operations Manual, **Manual of Site Management**, Environmental Design Press. p4.

Table 7-1 Public Preferences for Use of Harriet Wetherill Park and Park Facilities			
	Most preferred	Neutral	Least preferred
Park Uses			
a. Enjoy the peace and quiet	62%	26%	2%
b. Walk on nature trails	66	21	2
c. Walk/run for exercise	53	30	5
d. Nature study on my own	26	46	15
e. Organized nature classes/ environmental programs	23	50	14
f. On-leash dog walking	24	34	30
g. Active recreation facilities	26	39	22
Facilities			
h. Walking paths	72%	15%	2%
i. Pond	50	27	10
j. Picnic Areas	48	32	8
k. Leave as is, no facilities	11	40	33
l. Nature facility for exhibits & classes	23	46	16

Source: Plymouth Township Public Opinion Survey 2005

Nature Based Recreation and Educational Opportunities

By securing grants from the Pennsylvania Department of Conservation and Natural Resources and PECO's Green Region program to undertake this park master plan, Plymouth Township seized the opportunity to investigate how Harriet Wetherill Park could offer nature based recreation and environmental education opportunities to serve people who live, work and visit here. The primary goal was to develop a community based plan that would serve the people of Plymouth Township throughout their life time through a park design that would foster a wide variety of organized and self-directed uses. Other major goals were to investigate how Harriet Wetherill Park could play a role in enhancing the quality of life in the community through the preservation of the cultural heritage landscape and agriculture. An offshoot of this idea was to explore potential ideas for how the park could generate revenues to offset some of the operating costs.

As the process unfolded, many organizations and citizens provided input and ideas. Through a series of meetings and public conversations, the Harriet Wetherill Park Study Committee, municipal officials, regional recreation and conservation associations, community organizations, citizens and the planning team carved out a consensus on how Harriet Wetherill Park could be conserved and serve the public most effectively. The parks' mission, vision, and guiding principles will set the "ground rules" that underlie how Harriet Wetherill Park is planned, developed, and operated. The range of public recreation desires and opportunities is listed below.

Natural Resource Conservation - Harriet Wetherill Park preserves important and valuable resources as public parkland. The public participation process found that people enjoy seeing the park and knowing that it is there – whether they use it or not! Harriet Wetherill Park offers scenic beauty, preservation of natural resources, and connections to other parks and trails systems in the region.

Natural Resource Protection

70 percent of the survey respondents indicated that protecting natural resources in Plymouth Township should be a priority.

Self-Directed Activities - With the hectic lives we all lead, having a place to go on our own is important. Harriet Wetherill Park offers an important respite for people to enjoy on their own terms at their own pace whenever they want. The park is especially important in terms of the beautiful views, natural and farmed areas. Harriet Wetherill Park will be the catalyst for a new programming service to be provided by the Department: a program to inform residents about outdoor facilities in the community that they can enjoy on their own as well throughout their lifetime. Interpretive signage that informs and interests park visitors will enable them to enjoy the park, and learn about the Township's natural resources at their own pace.

Environmental Education - Pennsylvania Department of Education mandates that all school students participate in an approved curriculum of environmental education. Harriet Wetherill Park offers a convenient nearby site for schools in the region to use for the purpose of environmental education in a natural environment. The public participation process for recent township parks and recreation planning projects found that people of all ages are interested in environmental programs.

Plymouth Township Programs - Harriet Wetherill Park offers the potential for an entire new program area for the Parks and Recreation Department which the citizens have rated nature as their top area of interest in recreation opportunities. Before the acquisition of Harriet Wetherill Park, the Department had no suitable municipal facility in which to offer nature based recreation and environmental education programs. Harriet Wetherill Park staff will not only be able to offer programs on site, but will also be able to develop and offer environmental programs for inclusion in other Township programs such as the camps, after school programs, and pre-school programs in other Township parks and the Greater Plymouth Community Center.

Restrooms - Support facilities are important to park visitors. Restrooms are also the standard by which park visitors judge the entire park system. Clean, bright restrooms are crucial to positive public perception about parks in terms of desirability and safety. If the restrooms are clean, people tend to value the park. The importance of the design and maintenance of this facility cannot be overstated. Having restrooms on-site will greatly expand the potential to offer programs and environmental education here.

Trails and Trail Hubs - Over 70 percent of the survey respondents indicated that they go to the township parks, especially to use the park trails. Walking is the chief form of exercise in the United States. The Center for Disease Control has called upon communities to develop safe and attractive pathways for people to use throughout their lifetime. This will help people of all ages to

engage in a healthy activity that will extend their lives and enable them to be healthier, happier and more productive citizens.

Harriet Wetherill Park could serve as a trail hub for the regional trail network in Montgomery County. Through trail connections in Plymouth and Whitmarsh Townships, Harriet Wetherill Park could be a destination along the way to Fort Washington State Park. Harriet Wetherill Park has the potential to be an important trail hub in the Montgomery County trail system.

Special Events Space - Harriet Wetherill Park offers the potential for special events space for events geared towards environmental and cultural programs. Harriet Wetherill Park will now provide a more appropriate setting for events such as Fall Fest.

For private events, Harriet Wetherill Park will have facilities that can be rented including pavilions, picnic groves, and potentially the park buildings for social and corporate events. Hosting more special events will attract more park visitors, generate revenues and create a powerful tool in attracting people and business to the Township by providing a “lot of things to do” here.

Special Event Participation

According to the community recreation survey, one of every two respondents indicated they participate in Plymouth Township's special events and another 16 percent would like to participate.

Picnic Areas and Pavilions - The park designs offer two pavilions and picnic areas for enjoyable group outings. Restrooms would also be available.

Group Outings and Programs – Community organizations such as Boy Scouts, Girl Scouts, school ecology clubs, senior adult clubs, neighborhood associations, service clubs and others will be able to use Harriet Wetherill Park for programs they wish to offer as a location for their events.

Fitness/Wellness - Fitness extends lives, improves self-image, reduces health care costs, reduces isolation, and makes people happier. According to the U.S. Surgeon General, the top public health issue is the lack of activity among the American public. One of the most important things that communities can do to help in this cause is to provide attractive, accessible areas for people to walk jog and run. The trails, social gathering areas, and nature study areas all offer possibilities for active living.

Family Play - According to a survey by **Money** magazine, traditional goals for health and money are taking a back seat to the desire to spend more time with the people we love¹. The top goals for 2006 among those surveyed included:

- Spend more time with family and friends (30 %)
- Get healthier (19%)
- Manage money better (18%)
- Pursue enjoyable activities (17%)
- Improve career (12%)

The plan for Harriet Wetherill Park addresses this public desire. A design tied to the strong heritage and values of the area will foster community

stewardship and provide lifetime memories for park visitors based upon the sense of place the park will provide.

Nature Center - The park plan has a footprint for a nature center. A full-service nature center with space for exhibits, activities, classrooms, meetings, restrooms, and administration and programming could be developed in Harriet Wetherill Park. It does not have to be developed right away and could be many years away.

Park Buildings - The buildings have potential in terms of expanding park programs and environmental education by providing shelter and activity space. With improvements, the barn could be operated as a community resource for the following potential uses:

- Facility rental space for community activities.
- Special event rentals for social gatherings.
- Cultural or environmental resource center used for environmental education.
- Community hub for identified aged groups or activities such as scouts.
- Birthday/nature-themed party center.

The Foundation for Plymouth Township's Park Management

It is crucial for Plymouth Township to look at its parks as a system. The Township is presently developing a formalized park maintenance management system that will cover all parks including Harriet Wetherill Park. This will spur the evolution of park maintenance from task performance into premier management. For this evolution to be viable, park management needs to be rooted in a system of core values. Work sessions with the Parks and Recreation Department management team, township officials and citizen participation through the Study Committee contributed to the formulation of the core values and guiding principles for Harriet Wetherill Park.

Core Values and Guiding Principles

The following statements include the core values and guiding principles upon which the management plan for Harriet Wetherill Park is based.

Core Values: Plan Foundation

The plan will focus on the overall good of Plymouth Township and the citizens, rising above individual or special interests, for the long-term invigoration of the community through parks and recreation. The plan will focus on incorporating natural resource management as an essential aspect of park management, using Harriet Wetherill Park as the springboard for incorporating natural resource management in all township parks and public space.

Guiding Principles: Plymouth Township's Parks & Recreation System

The following statements comprise the guiding principles to channel the development and operation of Harriet Wetherill Park holistically with all township parks and other regional park, recreation, trail and natural resource connections. They are based, in part, upon principles established by Montgomery County Parks and Heritage Services, thereby providing a common framework for taking care of parks and natural resources in the region. They can serve as the foundation for Plymouth Township's maintenance management system that is under development.

- Honor the Wetherill property through effective management
- Conserve the cultural heritage landscape of Harriet Wetherill Park as a significant asset using best management practices.
- Manage the park to conserve its resources and provide responsible public use.
- Leverage township resources with other resources to operate and maintain the park.
- Phase park improvements in over time
- Build partnerships and harness community resources to develop and operate the park.
- Finance Harriet Wetherill Park development and operation through a mix of tax and non-tax dollars.

Modeling Harriet Wetherill Park Development and Operation

Based upon the core values and guiding principles of the municipal park, recreation and open space system, Plymouth Township could consider adopting the model of great park systems in the United States in order to achieve its own status in this classification. This would be in concert with the recommendations and strategies of **Plymouth...Naturally!** by including the following:

1. **Mission Statement** - Strive to achieve the mission statement for the parks that are based on the department's mission. The mission statement for the Parks and Recreation Department is shown in Figure 7-2. The vision and mission statements for Harriet Wetherill Park are presented after Figure 7-2.
2. **Show leadership** - Demonstrate strong leadership to articulate the potential and importance of Harriet Wetherill Park in a strategic and assertive fashion.
3. **Listen and respond to the community** - Be highly responsive to community needs. Continue to involve key stakeholders in the park planning, design and development process and in managing the parks.

4. **Build Plymouth Township's constituency for the parks -**
Develop a base of public supporters with individuals, community organizations, business, social service organizations, the schools and other private and public organizations.
5. **Work with others! -** Cooperate fully with other community organizations and boards regarding Harriet Wetherill Park.
6. **Adopt a business-like approach in operating and maintaining Harriet Wetherill Park** – Include Harriet Wetherill Park in the implementation of the maintenance management plan that is currently under development. Workload and cost tracking will be an important part of Plymouth Township's maintenance management system. It will help the Township Parks and Recreation Buildings and Grounds staff to document facts and figures, develop management reports and provide information to key stakeholders in a timely fashion. Information can be analyzed to assist in decision-making, planning management and resource allocation in a similar fashion to how information is used in Greater Plymouth Community Center operations. Effective collection of data and information analysis has proven to be an important tool in Plymouth Township Parks and Recreation Department use in policy development, cost recovery and resource allocation.
7. **Implement the park plan -** Carry out the actions to be accomplished with a schedule for implementation, which will be responsible including potential partners, and how Plymouth Township will secure the resources to undertake the action.
8. **Establish accountability -** Adopt practices that insure accountability of tax dollars and other resources as well as that document the clear benefits of Harriet Wetherill Park to Plymouth Township elected and appointed officials, the citizens, community groups, the business community, and state and regional organizations.
9. **Be action-oriented -** Move quickly and take advantage of emerging opportunities and changing needs. Make the case to move ahead with park development strategically on the basis that the parks are tied directly to the quality of life in Plymouth Township.

Figure 7-2
Parks and Recreation Department
Mission Statement

To enhance the quality of life in the community through stimulating recreational activities and programs while preserving the natural beauty of park facilities through continuous care.

Harriet Wetherill Park Vision and Mission

Initial Vision

Harriet Wetherill Park is a model of conservation and public recreation for people who live, work, and visit in Plymouth Township.

Initial Mission

Plymouth Township will plan, design, develop, program, and maintain Harriet Wetherill Park with the spirit and resources necessary to conserve the priceless legacy of the natural and culturally significant property as a public park.

How Harriet Wetherill Park Will Be Operated

Harriet Wetherill Park is a completely different kind of park than the others in the Plymouth Township park system. The other township parks provide important facilities for active recreation and sports. Harriet Wetherill Park complements these parks by offering a distinct experience for park visitors: nature based recreation and environmental education.

Harriet Wetherill Park also offers the opportunity for a whole new program area rooted in natural resources and the environment. Environmental resource management and programming will become a new function of the Plymouth Township Parks and Recreation Department harmonizing with Facilities and Program Management, Administration, Aquatics, and Fitness and Sports. Plymouth Township will operate Harriet Wetherill Park as follows:

1. The public will have free access to Harriet Wetherill Park for self-directed recreation such as walking, nature study, bird and wildlife watching, enjoyment of the scenic beauty and a host of other experiences that do not require the use of staff or special facilities.
2. The Township will charge user fees for programs that benefit only those individuals engaged in the activity or service.
3. The Township will charge fees for the rental or lease of special park facilities to individuals on a reserved basis to the exclusion of the general public.
4. The Township will create partnerships with other community organizations for programs, services and projects that will enhance the conservation of natural resources, park facilities and programs.
5. Harriet Wetherill Park development and programs will be phased in over time as resources and partnerships permit. The immediate goal of the Parks and Recreation Department is to protect the park's natural resources and to facilitate responsible

public use for nature based recreation by park visitors at their own discretion in accordance with park rules and regulations.

6. The Township will create the position of an Environmental Resources Specialist to establish a new kind of approach to park management, one rooted in volunteerism and partnerships. Other Plymouth Township parks are maintained primarily by the Buildings and Grounds Department. Community sports organizations also provide significant volunteer maintenance of community sports facilities. Buildings and Grounds will still be responsible for major park maintenance such as mowing and tasks involving heavy equipment operation. Other tasks will be undertaken by volunteers including Eagle Scouts, school groups, environmental organizations, community service groups and others. Examples of such tasks are trail maintenance, environmental education, interpretation of park and natural features, bird counts, Harriet Wetherill Park ambassadors, research and so on.
7. Volunteerism will be extensive in Harriet Wetherill Park. It will be operated as a program area in which volunteers are recruited, trained, supported and recognized. Volunteer assignments will capitalize on the emerging ethic of volunteers who want to contribute their expertise and talent to better their community and the world.
8. The Township will develop policies on the use of the park by other groups including schools, day care centers, scouts, etc. These will be based on the core values, guiding principles and vision of Harriet Wetherill Park.

Management Approach

The approach to managing Harriet Wetherill Park will include four components:

- **Park Programming and Environmental Education** – The programming and environmental education to be undertaken in Harriet Wetherill Park will be the foundation for how the park will be managed, maintained and operated.
- **Organization** – The organization of the Parks and Recreation will evolve as Harriet Wetherill Park is phased in through construction and the institution of nature-oriented park programs.
- **Maintenance** – Harriet Wetherill Park maintenance will depart from traditional Plymouth Township park maintenance in which facilities are manicured for active recreational use. The emphasis will be on conservation of the natural resources, especially the wild grasses and flowers, and on wildlife habitat preservation.
- **Staffing** – The number of parks and recreation staff will also evolve as programs are instituted and expand. Programs and services will be targeted at environmental experiences for park visitors.

Park Programming and Environmental Education

Harriet Wetherill Park programming can be accomplished through modes with different levels of service and resources required. The addition of an Environmental Resources Specialist will enable the Township to develop environmental based programs and services at Harriet Wetherill Park. The activities in each one of the modes are seen as cumulative as the Township adds additional modes of service. For example, Mode IV would include all of the activities in Modes I, II, and III. The four program modes include:

- Mode I - Promotion and Awareness
- Mode II - Small Scale Programs
- Mode III - Full Scale Programs
- Mode IV - Nature Center

Environmental Resources Specialist

The Environmental Resources Specialist will be responsible for managing the operations at Harriet Wetherill Park. This will include natural resource conservation, environmental education, nature based programs, partnership building, coordination of programs with other providers, and establishment of the volunteerism program.

Program Mode I: Promotion and Awareness

Activities

Mode I of programming would be to advertise and promote Harriet Wetherill Park for drop-in, self-directed park use. Year round outdoor recreation activities could include walking, nature observation, relaxation and restoration, enjoying the solitude, photography, wildlife observation and so on.

Township Role

Advertising Harriet Wetherill Park through a formalized promotional program that would include Leisure Visions, the WEB site, email, fliers, brochures, word of mouth, targeted direct mailings, speaking engagements, signage, kiosks in the park, and other methods that may emerge.

Township Resources

The Township would use current parks and recreation staff in programming and public awareness to develop and implement the promotional program to inform citizens about Harriet Wetherill Park. The Township will also establish the position of Environmental Resources Specialist to plan, develop and manage Harriet Wetherill Park programs, services, conservation of natural resources and coordination with Buildings and Grounds on park maintenance.

Program Mode II: Small Scale Programs

Activities

Mode II programming would include activities and events that could be undertaken by the Environmental Resources Specialist with some support from existing parks and recreation department staff. The activities would be of short duration with respect to the lack of restrooms. Longer programs could be considered if the short term solution of port-a-potties is implemented. Programs could be targeted to specific client groups for nature based recreation as well as for fitness and wellness. This could include walking clubs, photography programs, and nature based art.

Township Role

Dedicate staff time towards program planning and a management. Programs should be in keeping with cost recovery guidelines and with respect to staff time available. Consideration would be given to establishing partnerships with other groups such as scouts who could do their own activities on site. The volunteer program would begin to be developed with parameters that could be successfully managed by the Environmental Resources Specialist.

Township Resources

The Township would hire an Environmental Resources Specialist and use current parks and recreation staff in programming and public awareness to plan, develop and carry out programs. The use of part-time staff or contracted recreation leaders should be considered with their cost built into the fee.

Program Mode III: Full-Scale Programs

Activities

Mode III programming would be high caliber, full-service nature based recreation programs, services, activities and events. The activities would include those typically seen in nature based parks such as programs about the seasons, wildlife, flora and fauna, wild grasses, climate, environment, art, fitness, photography classes and exhibits, major special events. Organized programs and special events would be available seasonally.

Township Role

The following fiscal year would be the first full year with the Environmental Resources Specialist. Grow the staff as programs increase in much the same pattern as GPCC grew while recovering costs. The Township would have to establish facilities in the park to house staff and support park visitors such as restrooms, parking, and shelter.

Township Resources

Funding for an Environmental Resources Specialist, park budget for materials, supplies, utilities and so on. Capital development funds for park improvements.

Program Mode IV: Nature Center

Activities

Mode IV would move Harriet Wetherill Park into the realm of full-scale environmental education through the establishment of a nature center. The primary focus would be on school students, followed by conservation organizations such as scouts, and then on the general public. The programs for school children would be consistent with the requirements of environmental education mandated by the Pennsylvania Department of Education as established in area School District curricula, private schools, charter schools, home schoolers, and day care centers.

Township Role

The Director of Parks and Recreation would plan the goals and objectives for creating partnerships with various schools and school districts including: Colonial School District, Norristown School District, Wissahickon School District, Springfield School District, Germantown Academy, Penn Christian Academy, Kennedy- Kendrick Catholic High School, Plymouth Meeting Friends, Epiphany Parochial School, and pre-schools in the area. The naturalist would be responsible for implementing the administrative policies, program development, implementation and evaluation.

Township Resources

Harriet Wetherill Park budget for staff materials, supplies, utilities, equipment, and miscellaneous costs. Parks and Recreation staff time for advertising and promotion. Director's time for policy development, partnership creation and cultivation, and promotion. Capital funds for facilities to support environmental education for over 10,000 visitors in organized schedule programs annually.

Program Mode Requirements: Tied to Resources and Outcomes

The program modes and phases of Harriet Wetherill Park development and programming are tied to resources. Table 7-3 presents the inter-dependent nature of the elements of these modes and visitor experiences. The outcomes in terms of programs and facilities are directly tied to the resources allocated. For example, organized large-scale programs require restrooms. Without restrooms, large-scale programs in the park cannot happen.

An environmental park rooted in volunteerism requires a dedicated Environmental Resource Specialist to plan, direct, control, and evaluate the volunteer network. Outcomes depend on staff time and funding. The modes are cumulative; higher modes would incorporate the elements of lower modes. The four program modes have requirements regarding level of park development, administration, maintenance, programming, and human and financial resources that are directly tied to visitor experiences and resource conservation.

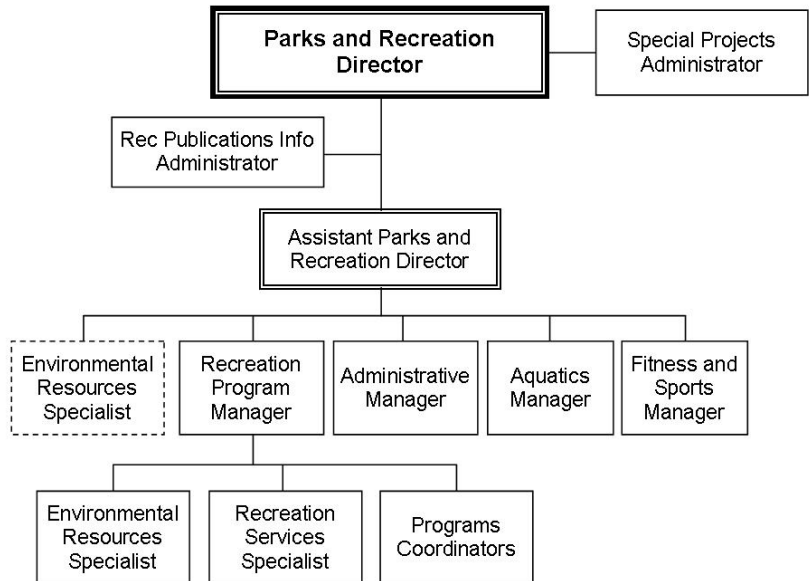
<p>Table 7-3 Harriet Wetherill Park Management Components by Program Mode</p>				
	Mode I: 2007 Promotion and Awareness	Mode II: 2008 Small Scale Programming	Mode III: Full Scale Programming	Mode IV: Nature Center
Level of Park Development	Early Implementation. Buffering started and site markers placed. Construction documents developed. Bidding.	Porta-johns.	Restrooms.	Nature center building in place. Park fully developed in accordance with master plan.
Administration				
Management	Time to develop operational program management plan. Launch Environmental Resources Specialist position. Recruiting, hiring, training. Control and enforcement of park boundaries. Public response to concerns and questions.	Oversight of environmental program area development. Major focus on teamwork approach to launching a new program area.	Negotiation of partnerships with major client groups such as schools	
Staff	Addition of Environmental Resources Specialist (ERS) beginning 9/07 Existing staff time to advertise Harriet Wetherill Park, produce materials, target promotions	Full-time ERS to develop year round programs, both organized and self- directed.	Limited environmental education.	Full scale environmental education serving over 12,000 participants annually.
Maintenance	Protection of grasses. Mowing paths weekly. Meadow mowing twice yearly. Trash removal. Response to citizens.	Begin development of formalized natural resource management program through ERS	Volunteer natural resource management.	
Programming	Self-directed drop-in opportunities for park visitors. No organized programs.	Begin development of volunteer & nature programs via small scale vol. projects and programs.		

Table 7-3 (Continued) Harriet Wetherill Park Management Components by Program Mode				
	Mode I: 2007 Promotion and Awareness	Mode II: 2008 Small Scale Programming	Mode III: Full Scale Programming	Mode IV: Nature Center
Human and Financial and Resources	Dedicated management time of about 6 hrs/week. Dedicated staff time of 8 hrs/week. Maintenance staff hours of about 800 hours for grounds to be absorbed with existing staff. \$32,050 in operating budget. Hiring of ERS with 9/07 start date.	\$74,150 in operating budget (estimated).	Budget to be determined	Budget to be determined
OUTCOMES				
Visitor Experiences	Enjoyment of Harriet Wetherill Park on a drop-in basis. Limited awareness of the resource.	Limited volunteer opportunities. Programs beginning. More awareness of Harriet Wetherill Park opportunities via promotion and interpretation.	Strong volunteer program development. Organized nature based programs, services & special events seasonally.	Full scale environmental education. Full service environmental education to major clients such as school systems.
Resource Protection	Basic maintenance of grass cutting, trash removal and repairs. No removal of invasive species or higher level of natural resource management	Development of natural resource management program. Plan for conservation of grasses. Plan for removal of invasive species. Custodial care of comfort and support facilities.	Implementation of full-scale resource conservation program. Actions underway to remove and control invasives. Plantings and maintenance to attract wildlife such as birds and butterflies.	Full interpretation of flora, fauna and wildlife. Actions to further naturalize area and introduce native flora, fauna and wildlife. A model of resource conservation and education.

Parks and Recreation Department Organization

As the Parks and Recreation Department adds Harriet Wetherill Park and nature based programming as a functional area, the organizational structure will need to evolve to support the new program area. Figure 7-4 presents the organizational structure when the Environmental Resources Specialist is hired. In Program Modes I through III, the Environmental Resources Specialist would fall under the Facilities and Program Manager with a re-organized structure. By Program Mode IV, the Specialist may move into a cabinet level position as shown in the chart with the dotted line for this position.

**Figure 7-4
Plymouth Township
Future Organizational Structure
With Environmental Resource Specialist**



Environmental Resources Specialist: The Key to Management

The Environmental Resources Specialist (ERS) will be the key to successful park management, volunteer program establishment and cost recovery. Figure 7-5 presents the job description for the Environmental Resources Specialist. This position needs to be established in 2007.

This position is crucial to the success of Harriet Wetherill Park. As evident in the job description, the Environmental Resources Specialist will be the principal responsible for launching, sustaining and cultivating all aspects of park operations and programming. There are three key areas of focus: natural resource management, environmental programs and services and developing the volunteer program. Harriet Wetherill Park will run primarily through volunteerism unlike any other park in the Plymouth Township system.

**Figure 7- 5
JOB DESCRIPTION**

TITLE: Environmental Resources Specialist

DEPARTMENT: Plymouth Township Parks and Recreation

THIS POSITION REPORTS TO AND IS SUPERVISED BY: Program and Facility Manager in coordination with the Parks and Recreation Director, and the Assistant Parks and Recreation Director, and works closely with the Building and Grounds Director and department.

THIS POSITION HAS AUTHORITY OVER AND SUPERVISES: Interns, volunteers, program instructors, and seasonal staff.

GENERAL DEFINITION OF POSITION: This is an administrative and hands-on position coordinating the natural resources area for Plymouth Township. The main focus will be to implement and coordinate environmental programs, natural resource management maintenance plans, volunteer groups and individuals, partnerships and projects to meet the goals of the Harriet Wetherill Park facility. This position requires a mix of environmental education, natural resource management, recreation experience, report administration, public relations, and promotional abilities. Requires considerable organizational skills, public and business contact, and creativity to manage facilities, staff, volunteers and projects and coordinate strong partnerships within the community. Works closely with the Parks management staff but must be able to perform independently. Evening and weekend work required.

ESSENTIAL JOB FUNCTIONS: (Any one position may not include all of the duties listed nor do the listed examples include all of the tasks which may be required of this position).

- Manages natural areas of the parks lands, buildings and trails within accepted standards and practices of conservation and natural resource management.
- Assists Parks and Recreation Management in setting the natural resource and Harriet Wetherill Park goals and developing strategies to meet these goals.
- Establishes with the Buildings and Grounds Department the formalized maintenance management plan for all natural areas within the parks with an emphasis on the Harriet Wetherill Park.
- Administers departmental nature programs for all ages including adults. Coordinates field experience, guided tours and educational programs for park visitors, schools, groups and families.
- Establishes, promotes and coordinates nature-based clubs and volunteer programs and services for all ages and types of groups. Recognizes volunteer and partnership efforts as well as in-kind services.
- Supervises seasonal staff, instructors, and volunteers. Coordinates with programming and facility partners for long-term projects and educational programs.
- Assists with promotional material, news releases, brochures, flyers, display areas, and general communications for the environmental-related projects and programs.
- Conducts research, creates environmental interpretive and educational displays throughout municipal buildings and parks grounds and writes educational articles for Township publications.
- Works on fundraising, grant applications, and partnership development programs along with the Parks and Recreation Department staff.
- Assists with budget preparation and prepares detailed reports on the services and finances of the Harriet Wetherill Park and other natural resource projects.
- Plans nature-based Township special events and assists in other Township-wide special events.
- Performs related work as required.

**Figure 7- 5
(Continued)
JOB DESCRIPTION**

REQUIREMENTS TO HOLD THIS POSITION:

1. Required Education/Experience/Training:
 - Graduation from a four-year college with a degree in biology, botany, ecology, environmental sciences, natural resource management, conservation or a related field.
 - Approximately three (3) years of experience in parks, recreation, outdoor education, facility management and working with the public.
 - Experience in developing partnerships and sponsorships preferred.
 - Any equivalent combination of experience and training that provides the required training skills, and abilities.
2. Required knowledge, Skills and Abilities:
 - Ability to create, plan, schedule and direct environmental programs and promotional campaigns with staff, volunteers, businesses, participants, and facilities in a timely fashion.
 - Ability to develop an employee/volunteer orientation and training plan, and a strong customer service plan, as well as track customer satisfaction and participation rates.
 - Strong knowledge of recreation program objectives, park operations, recreation facility operations.
 - Computer skills and knowledge to create documents on Excel, Word, Power Point, Recreation Software packages and promotional programs including graphics.
3. Required Licenses/Certificates/Registrations:
 - Employee must have or be able to obtain a valid Pennsylvania Drivers License.

WORK SCHEDULE:

Requires scheduled nights and weekends, and may rotate seasonally.

Park Maintenance

Park Maintenance

The goal of park maintenance for Harriet Wetherill Park is to provide a safe, clean, and attractive appearance for the conservation of natural and cultural resources as well as the healthful and enjoyable use by the community through implementation of an efficient and effective management program.

Park maintenance is a function of the Plymouth Township Buildings and Grounds Department as shown in the organizational structure in Figure 7-4. The directors of Parks and Recreation, and Buildings and Grounds share a positive collaborative working relationship. Park maintenance in existing parks has been geared towards a manicured approach to serve mainly active recreation. Harriet Wetherill Park presents new challenges to the maintenance team as the park is rooted in conservation of natural resources, quite the opposite of manicuring facilities.

The Director of Buildings and Grounds played an important role in developing the master plan for Harriet Wetherill Park including many work sessions with the planning team and with Mr. Wetherill. In addition to participating on the Study Committee, Mr. Wetherill provided several days of consultation on the property to inform the township staff and the consultants about important resources, issues regarding protection of the resources, significant flora, fauna, invasive species, drainage, mowing patterns and current use of the park. Mr. Wetherill

provided his book, “A Field Guide to Common Grasses of Southeastern Pennsylvania”, on grasses and developed a map (Chapter 3-8) identifying the location of grasses and important flowers within the site. He also consulted to formulate an approach to mowing for areas that should and should not be mowed as well as mowing schedules.

Plymouth Township has a Peer-to-Peer grant funded by the Pennsylvania Department of Conservation and Natural Resources to undertake the development of a planned maintenance management system for parks and recreation facilities. The planned maintenance management system will provide formal written methods for planning, directing, and controlling and evaluating park maintenance. The results of this project will apply to Harriet Wetherill Park.

Maintenance Standards

Maintenance standards set forth the level of care, park and recreation facilities receive. The National Recreation and Park Association² offer a maintenance standard classification system with six modes. Modes refer to the “way of maintenance” ranging from most intensive to least intensive. The beauty of the mode system is that maintenance is planned at an appropriate level for the facility. The modes are not a measure of a grade such as a Grade A being excellent versus a Grade C being average. The modes reflect the level of maintenance suitable for the specific park, natural area or recreation facility. It is perfectly acceptable and it makes a good deal of sense to establish different modes of maintenance for different parks and even within parks.

The standards for Greater Plymouth Community Center would be very different from Harriet Wetherill Park. Greater Plymouth Community Center is for active recreation while Harriet Wetherill Park is a natural resource based park. The maintenance management system under development for Plymouth Township Park and Recreation Department will incorporate standards for the township parks.

The following standards are proposed for Harriet Wetherill Park with respect to resource conservation and responsible public use of the park. The standards will enable Plymouth Township to direct resources towards where the need is greatest and the benefit the most. The modes range as follows:

- Mode VI – Natural Areas that are Not Developed. This mode covers most of Harriet Wetherill Park and includes the natural and undeveloped areas of the park. This includes the following:
 - Turf Care: Mowed only to meet township regulations. Mowing the meadows twice a year in accordance with the blooming schedule of the grasses and flowers would mean an April and October mowing of the meadows.
 - No fertilization, irrigation, pruning, disease or insect control (unless there is a safety hazard), snow removal or floral plantings.

² National Recreation and Park Association. (1986). **Park Maintenance Standards**. Alexandria, VA. 59p.

- Litter control will be based upon a policy of “pack it in – pack it out”. An educational display will provide park visitors with information about trash telling them to take away whatever they bring in with them. When more developed facilities are phased in, trash cans would be required at pavilions, the nature center and so on as absolutely needed. This policy is successfully used by many nature based parks. Should this policy work here, Plymouth Township could expand it to other parks as well. It will result in cost savings and litter free parks as park users become educated about removing their own trash.
- Inspections would be done once per month for the park as a whole.
- Mode III – Moderate Level of Maintenance is associated with locations with a moderate level of development. This includes the trails and pathways. This includes the following:
 - Turf Care: Grass cut on pathways every ten days including: mowing the meadows twice a year in accordance with the blooming schedule of the grasses and flowers as stated above.
 - No fertilization, irrigation, pruning, disease or insect control (unless there is a safety hazard), snow removal or floral plantings.
 - Inspections would be done when the grass is mowed.
- Mode I– State of the Art Maintenance for the high traffic areas of Harriet Wetherill Park. This would include the Nature Center and its immediate grounds should it be developed. This includes the following:
 - A building maintenance program should be developed and surrounding grounds should be designed to require as little maintenance as possible through the installation of nature species and a landscape planned for minimal care.
 - Standard would apply to park restrooms with servicing daily and multiple servicing for special events or high participation programs.
 - Inspections should be done daily.

Maintenance Tasks

The maintenance tasks for Harriet Wetherill Park fall into three main areas:

- Grounds
- Natural Resource Management
- Buildings

Grounds - Maintenance will encompass the care of the public areas of the park such as the pathways, parking lots and developed facilities such

as bird blinds, and interpretive signage. Developed facilities will be minimal. Grounds maintenance work will be coordinated with natural resource conservation. An example of this coordination will be grass mowing. A plan for pathway mowing is in place which features cutting the path up to about a foot from the woodland border adjoining the path in order to provide shade for flowers and grasses. The meadows will be mowed twice annually (April and October) in conformance with the bloom schedule provided by Mr. Wetherill. Care will be taken to insure the conservation of important flora and fauna. The goal of grounds maintenance will be provide as natural appearance as possible.

Natural Resource - Management is a major goal of park care. The Environmental Resources Specialist will develop a natural resource management plan for Harriet Wetherill Park. It will include conservation of natural features, elimination of invasive species and responsible public use and education.

Building - Maintenance will be undertaken in phases ranging from basic securing and care to Mode I maintenance for buildings with high public use. Initially, building use would be restricted to porta-john rental to enable park programming and events until permanent restrooms are constructed in conformance with the recommendation in

Plymouth...Naturally!, Program and Management Impact Statements should be undertaken for all buildings when ownership and improvements are planned. The management plan would include standards of care, maintenance quality standards, delineation of tasks, definition of roles and responsibilities for accomplishing maintenance, and projected costs.

One area of building costs that will be higher is in restroom maintenance. It is imperative that the Harriet Wetherill Park restrooms be clean, attractive and fresh. This park will be another crown jewel for Plymouth Township just as Greater Plymouth Community Center is. Restroom conditions are likely to be the standard bearer for park care in the eyes of park visitors. This translates into daily restroom servicing as the norm with more frequent checks and refreshing during peak use such as when buses are bringing large numbers of park visitors for environmental education and programming.

Doing Nothing Costs Something

Mothballing facilities still costs money. Even if facilities are closed, there are basic costs involved with sustaining the facility to prevent deterioration that would affect the health, safety and welfare of the public. As an example, when New York City faced bankruptcy in the 1980's, portions of Central Park were closed. The City found that even with closing these facilities, about \$500,000 was needed annually just to keep them in a secured closed condition.

The Maintenance Budget

In order to estimate a budget for maintaining Harriet Wetherill Park, projections should be made based upon local experience; national standards; and costs for labor, materials and equipment. There is no formalized tracking of workload or cost tracking in park maintenance in

Plymouth Township at present. That is one of the reasons the Peer-to-Peer project is being undertaken. It will result in a system by which the Township can track work hours, materials, supplies, equipment use by task and by park cost center. This information will be similar to how Greater Plymouth Community Center tracks resources, costs, labor, utilities and other factors. Greater Plymouth Community Center management used cost tracking information to make changes in building systems resulting in energy cost savings.

At present, Plymouth Township is spending about \$4,400 per acre for park maintenance which is higher than about \$3000 per acre seen in similar suburban park systems. Using \$4,400 per acre as a rule-of-thumb for Harriet Wetherill Park, the 52 acre portion of Harriet Wetherill Park (not including the 15 acre life estate area) would cost about \$229,000. The 15 acre area will cost more due to the requirements of building maintenance and utilities. However, Harriet Wetherill Park is a different kind of park. Several factors will mitigate park maintenance costs.

1. It is likely that the maintenance tasks to be performed can be absorbed within the existing park maintenance staff time and budget until buildings are included in park operations. The Director of Buildings and Grounds has been involved in the park planning process including several on-site work sessions and discussions with Mr. Wetherill. He is also involved with the development of the Park Maintenance Plan as part of the Peer-to-Peer project.
2. It is a natural resource park without the requirements of active recreation areas that need intensive maintenance and a manicured appearance.
3. Policies such as "Pack it in - Pack it out" for litter will result in considerable cost savings through the elimination of staff time and equipment required to do litter pick up and trash removal.
4. The investment in the salary and benefits of the Environmental Resources Specialist will greatly reduce costs and enhance park care through the development of a full scale volunteer program.

A New Kind of Volunteer

Volunteerism is no longer relegated to undesirable tasks that staff do not want to do. Volunteers are looking to use their skills to contribute to making their community and the world better. Volunteers are likely to be well-educated, knowledgeable, experienced and have unique skills and talents to contribute. Parks such as Harriet Wetherill Park with a natural resource focus will attract successful people who want to use and contribute their expertise. As an example, the Churchville Nature Preserve does all park care and many programs through volunteerism. Churchville calls upon the Bucks County Parks and Recreation Department only for major tasks and projects that entail heavy equipment operation. Volunteers don't happen! They require recruitment, training, supervision, recognition and on-going support.

5. The development of the Park Maintenance Management system will provide a system for workload cost tracking. This system will provide important information on labor, equipment and material costs for planning and decision-making.
6. The establishment of a trust fund could help to generate proceeds to support park operations.

Endowment – Trust Fund

A potential method for providing maintenance funds is the establishment of an endowment for Harriet Wetherill Park. Private funds help to establish the endowment or trust fund which is invested so that the proceeds can be distributed to the park... The Trexler Trust in Allentown, Pennsylvania is a fine example. Harry Trexler bought and donated over 2,000 acres of park land to establish the Allentown park system nearly 100 years ago. He also bequeathed funds to establish the Trexler Trust. Under the provisions of the Trexler Trust, a portion of the annual revenues from trust investments go to the maintenance, improvement and extension of Allentown's parks. Depending on how financial markets perform, the fund proceeds vary but have been contributing from \$500,000 to \$1.5 million annually in recent years. The Trexler Trust also serves as a "Watch-Dog" for park operations and improvements. A Board of Trustees for the Trust has been influential in garnering support for the parks as an advocacy organization.

Projected Operating Budget

Table 7-6 presents the projected budget for Harriet Wetherill Park based upon the master plan, consideration of the big picture of park requirements in Plymouth Township, the ANCA report, and examples of budgets for similar parks elsewhere – all tailored for Harriet Wetherill Park. The phasing in of facilities over time would result in maintenance costs ranging from a basic level that would increase as more facilities were added. Parks evolve over time. Plymouth Township has been revitalizing community parks over the last 15 years. The operating costs for the buildings need to be developed in conjunction with the development of a building plan or a feasibility studies for identified purposes. Cost projections after 2008 should be based upon the park improvements in Harriet Wetherill Park. Without solid information on improvements, cost projections would be conjecture. Plymouth Township also has a tool to use in cost projections, the Maintenance Impact Statement. The Township adopted the use of this tool in 2006 in the **Plymouth Township Recreation, Parks and Open Space Plan: Plymouth... Naturally!**

Table 7- 6 Harriet Wetherill Park Projected Operating Budget		
	2007	2008 Estimated
Salary Staff – Envir. Resource Manager	\$13,300	\$42,500
Regular Part Time	1,000	2,000
Temp – Seasonal	300	1,500
Instructors	500	700
Overtime	500	500
Attendance Incentive	75	400
Office Supplies	200	400
Recreation Program Supplies	300	1,000
Grounds keeping, Agricultural Supplies	1,500	2,500
Gasoline, Oil, Grease	150	150
Building Maintenance Supplies	0	0
Clothing and Uniforms	100	100
Tires - Tubes	200	200
Vehicle & Equipment Repair Parts	300	400
Miscellaneous Supplies	400	800
Small Tools	1,500	1,500
Recreation Program Equipment	900	1,200
Computer Hardware	700	900
Computer Software	200	300
Internet Services	200	400
Telephone Charges	700	1,450
Postage, Mailing, Delivery	400	400
Contracted Instructors	400	1,400
Vehicle Allowance	175	500
Printing -Advertising	500	1,000
Electricity	0	3,000
Natural Gas	0	0
Water	0	0
Maintenance-Repair Buildings	0	0
Maintenance – Repair Grounds	2,000	3,000
Miscellaneous Services	5,000	5,000
Dues, Subscriptions, Memberships	350	450
Training - Seminars	200	500
Building Systems – Replace & Improve	0	0
Total	\$32,050	\$74,150

Potential Revenues

Parks with nature centers are usually funded by a combination of tax and non-tax revenues. They tend to generate most of their operating costs through fees from school programs, public programs, special events, and memberships. Table 7-7 presents a sample budget from the Churchville Nature Center which shows revenue sources. Harriet Wetherill Park is just getting started while the Churchville Nature Center is about 50 years old. It takes time to grow the programs and generate revenues. Just as Plymouth Township began to generate significant revenues when indoor recreation facilities became available at Greater Plymouth Community

Center, revenues would increase commensurately at Harriet Wetherill Park with the addition of a nature center building.

Potential Sources of Revenues

There are four broad categories that cover revenue generation for parks and recreation. They include:

- **Compulsory Resources** - tax allocation from the general fund, mandatory dedication of parkland for residential and commercial development (including redevelopment), and dedicated fees from such things as cable television, and fines for vandalism.
- **Fees and Charges** - Fees charged for programs, admissions, events, facility use fees. It is important for the Township to establish a policy on fees and charges in Harriet Wetherill Park. The intent of the policy is that all park revenues should be generated by Plymouth Township or through a partnership the Township would establish with another organization.
- **Rentals, Licenses and Permits** - Rentals of equipment or facilities, licenses to sell products in parks, permits for facility use, advertising in parks.
- **Grants, Gifts and Bequests** - Sponsorships; partnerships; bequests; donations; state, county, federal and private grants; park friends organizations; private fundraising efforts for recreation facilities or park purposes.

Plymouth Township Revenue Targets

Since Harriet Wetherill Park will be phased in over three stages, the programming opportunities and corresponding revenues will be related to park facilities and the level of staffing. The stages for implementation of the Master Plan include: Early Implementation, Initial Public Use and Capital Investment. In addition to the stages of park improvement, the park has four modes of programming. As shown in Table 7-3, the modes include Promotion and Awareness, Small Scale Programs, Large Scale Programs and Nature Center. Revenues would relate to these programming modes.

Initially, there would be no program revenues as park visitors use the park for self-directed uses and there are no entrance fees. Revenues would begin to be generated with small-scale programs and grow through large scale programs, and ultimately the Nature Center programs. This plan recommends the revenue guidelines work up to a cost recovery goal of 50 percent. The revenues generated by other nature centers studied for this project fall in the \$200,000 to \$300,000 range annually for nature centers that are

fully established and have been in operation for many years. The key is phasing in and growth. The Township needs to grow the programs and services over time.

Table 7-7 Churchville Nature Center FY2006 Agency Operating Budget (Combined Friends of Churchville Nature Center & Bucks County Parks and Recreation Expenses and Revenue)	
Revenue	
Government	\$139,800
Individuals	\$38,000
Special Events	\$68,200
Fee for Service	\$179,000
Total Revenue	\$425,000
Expenses	
Personnel / Salaries	\$326,958
Administrative Costs	
Advertising/Subscriptions	\$3,000
Equipment Purchase/Maintenance	\$600
Insurance	\$4,000
Maintenance/Janitorial	\$5,650
Miscellaneous	\$1,200
Office Supplies	\$5,500
Postage	\$200
Printing/Duplicating	\$1,000
Telephone	\$800
Travel	\$1,200
Utilities	\$9,800
Administrative Total	\$32,950
Programs and Services	
Annual Meeting	\$2,000
Educational Programs	\$10,000
In-Service Training	\$1,000
Membership	\$1,000
Gift Shop	\$22,250
Volunteer Program	\$1,600
Wildlife Gardens	\$5,200
Program and Services Total	\$43,050
Professional Services	
Accounting	\$2,000
Audit (Annual Review)	\$1,500
Board & Staff Training	\$1,000
Contracted Services	\$1,000
Professional Services	\$5,500
Total Expenses	\$408,458

Capital Development Costs

As shown in chapter six, the total development cost of Harriet Wetherill Park will be \$5.88 million spread over five stages and many years of phased implementation. Plymouth Township intends to use a combination of funding sources to pay for park development. These include:

- Plymouth Township Park Recreation Impact Fees.
- Government grants from Pennsylvania Department of Conservation and Natural Resources and Department of Community and Economic Development.
- Grants from the private sector such as from Comcast, PECO, REI, Pew Foundation, William Penn Foundation and others to be determined.
- Partnership projects with community organizations for development of special park features such as the bird blinds, nature center components, and park furnishings, etc.
- Environmental partnerships with organizations such as the Audubon Society and Montgomery County Parks and Heritage Services.
- Community service initiatives such as scout projects, community clubs, and justice system labor.

Recommendations for Harriet Wetherill Park

- A. Develop the construction drawings, plans and specifications for Harriet Wetherill Park as recommended for the phases.
- B. Coordinate maintenance management planning with the Peer-to-Peer project dealing with the development of a formalized maintenance management system. To get started, develop an annual maintenance calendar for Harriet Wetherill Park. This should be based upon Mr. Wetherill's mapping of the significant flora and fauna. Absorb the limited maintenance tasks required in the existing park maintenance program. Work with new knowledge on computerized tracking to make this happen.
- C. Secure the perimeter of the park and buffer the neighboring properties to establish the park as a good neighbor.
- D. Inform neighboring property owners of any encroachments they have made on park property to have them removed immediately. Inform park neighbors of any maintenance practices they are now undertaking on the adjoining park property that are inconsistent with the mission and goals of Harriet Wetherill Park. Instruct them to stop these practices. If there are any collaborative projects between the neighbors and Harriet Wetherill Park, explore the potential for joint ventures consistent with the park master plan.

- E. Appropriate an operations and management budget for Harriet Wetherill Park in line with Table 7-7.
- F. Develop a promotional program to inform citizens about Harriet Wetherill Park, its beauty and serenity for drop-in use for walking, nature observation, relaxation and bonding with family and friends.
- G. Recruit and hire the Environmental Resources Specialist in 2007. The Environmental Resources Specialist should focus on getting the park going, promoting responsible public use and visitation in Harriet Wetherill Park, developing a natural resources plan, a program plan and a volunteer program. Establish the volunteer program slowly and effectively. Try to work with groups rather than individuals as it will be easier to manage groups. Develop a list of projects commensurate with desirable volunteer activities in which the volunteers will contribute substantially to Harriet Wetherill Park and garner feelings of satisfaction as a result of their time in Harriet Wetherill Park.
- H. Continue to manage the Parks and Recreation Department based upon a philosophy of teamwork. The addition of the Environmental Resources Specialist within the program division will require awareness and dedication to teamwork and collaboration. Since the Environmental Resources Specialist will report to the Facilities and Program Manager and will need to work with the Parks and Recreation Director and the Director of Buildings and Grounds, all involved need to be aware of the importance of ongoing effective communication. This approach already works well in the Plymouth Township Parks and Recreation Department and should continue.
- I. Phase in the program modes based upon the resources available. The outcomes and vision experiences will depend upon staff time and budget.
- J. When the Environmental Resources Specialist is on board, decide when to launch a Friends of Harriet Wetherill Park organization. Obtain 501-C-3 status under the IRS for this organization.
- K. Develop an annual work program with goals and objectives for Harriet Wetherill Park in terms of resource conservation and visitor services. Review accomplishments quarterly in the early years of park development, tapering off to semi-annual reviews.
- L. Be rigorous in visitor evaluations. Evaluate every program, Seek visitor input on site. Hold focus groups with park visitors as well as non-users.
- M. Provide solid information to elected and appointed officials about Harriet Wetherill Park regarding visitation, program, maintenance, partnerships, revenues and expenditures.
- N. Develop a long term financing plan to fund the capital development of the park.

- O. For any major improvement, develop the Program or Maintenance Impact Statement recommended in **Plymouth... Naturally!** to insure the resources will be in place to maintain/support the improvement or program.



Appendix A

Architectural Assessment



George J. Donovan AIA
&
Associates
Architects

22 May 2006

Ann E. Yost, RLA
Yost Strodoski Mears
19 South Newberry Street
York, Pa. 17404

RE: Harriet Weatherill Park

Dear Ann,

The following is a report of my findings and conclusions concerning the Building Assessment of the existing structures located at Weatherill Park located on Butler Pike in Plymouth Township. The referenced standards utilized in the assessment are A) ICC/ANSI A117.1-1998, B) 2003 International Building Code, C) 2003 International Residential Code and D) 2003 International Existing Building Code. The findings are broken down and presented per building. The buildings are as follows:

- 1) Existing Dwelling
- 2) Shed #1- Caretaker House
- 3) Shed #2
- 4) Shed #3
- 5) Barn #1- Apartment/Garage/Stable
- 6) Barn #2- Indoor Riding Stable
- 7) Barn #3

The findings, based on the assumption that the structures will be utilized for public use in some capacity, are as follows:

1. EXISTING DWELLING (Construction Type VB-Combustible/Unprotected)
2. SHED #1-CARETAKER HOUSE (Construction Type VB-Combustible/Unprotected)

a) All steps on a flight of stairs shall have uniform riser heights and uniform tread depth. Risers shall be 4-7 inches high. Treads shall be 11 inches deep min., measured riser to riser.

b) At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches min. beginning above the first riser nosing. Such extension shall return to a wall, guard, or the walking surface, or shall be continuous to the handrail of an adjacent stair flight.

c) At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the last riser nosing. Such extensions shall



continue with a horizontal extension or shall be continuous to the handrail of an adjacent stair flight or shall return to a wall, guard, or the walking surface. If provided at the bottom of a stair flight, a horizontal extension of a handrail shall be 12 in. long min. and height equal to that of the sloping portion of the handrail as measured above the stair nosings. Such extension shall return to a wall, guard, or the walking surface, or shall be continuous to the handrail of an adjacent stair flight. Also, handrails are required on both sides of the stairs.

d) A 5 ft. wheelchair turning space shall be provided within toilet/bathing rooms.

e) Doors shall not swing into the clear floor space or clearance for any toilet fixture.

f) Clearance around water closets shall be 60 inches min., measured perpendicular from the sidewall, and 56 in. min., measured perpendicular from the rear wall. No other fixtures or obstructions shall be within the water closet clearance. The top of water closet seats shall be 17-19 in. above the floor surface. The centerline of the water closet shall be 16-18 in. from the sidewall.

g) Sidewall grab bar shall be 42 in. long min., 12 in. max. from rear wall and extending 54 in. min. from rear wall. Rear wall grab bar shall be 24 in. min., centered on the water closet. Grab bars shall be mounted in a horizontal position, 33-36 in. max. above the floor.

h) Flush/water closet controls shall be lever handles or automatic.

I) Lavatories shall be provided with a 30 in. by 48 in. clear space. The front of lavatories and sinks shall be 34 in. max above the floor surface. Faucets shall be operated by lever handles or be automatic. Water supply and drainpipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact.

J) Handles, pulls, latches, locks, and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. Such hardware shall be 34-48 in. above the floor or ground.

k) Vertical exit enclosures are required for interior exit stairways. Exit enclosures where connecting less than 4 stories are to be not less than 1 hour rated with opening protectives (doors) of no less than 45 minutes equipped with UL rated egress latch, hinges, and self closers. Additionally, an enclosed exit stairway, to be considered part of an accessible means of egress, shall have a clear width of 48 inches min. between handrails and shall either incorporate an area of refuge within an enlarged floor-level landing or shall be accessed from either an area of refuge or a horizontal exit. Areas of refuge shall be provided with a two-way communication system between the area of refuge and a central point.

l) Rooms/basement areas with any boiler over 15 PSI and 10 HP shall be separated from other areas by min. 1 hour rated construction (floor, wall, ceiling, and openings).

m) Guards shall be located along open-sided walking surfaces, stairways, areaways, landings, and etc., which is, located more than 30 inches above the floor or grade below. Guards shall form a protective barrier not less than 42 in. high and open guards shall have balusters such that a 4 in. diameter sphere cannot pass through any opening up to a height of 34 in. From 34 in. – 42 in. high a sphere of 8 in. shall not pass.

n) The means of egress, including exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

o) Exit and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Exit signs shall be internally or externally illuminated.

p) At least 50% of all public entrances to a structure shall be accessible to those with physical disabilities.

q) The minimum number of exits to be provided for all rooms and spaces within each story with an occupant load of 1-500 is two.

3) SHED #2 (Construction Type VB-Combustible/Unprotected)

4) SHED #3 (Construction Type VB-Combustible/Unprotected)

7) BARN #3 (Construction Type VB-Combustible/Unprotected)

a) The structures are similar in that they are all three-side enclosed without electric, mechanical, and plumbing utilities provided at this time.

b) One-story structures of this construction type and overall square footage are not exempt from any public use category/group except for Use group H-1/High-Hazard. Therefore, when a specific use is proposed for any or all of these structures, all renovation and upgrades will be required to be installed and be operational as per the latest version of the adopted building code, i.e. utilities, doors, bathrooms, etc.

5) BARN #1-APARTMETNT/GARAGE/STABLE (Construction Type VB-Combustible/Unprotected)

a) Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8 inch Type X gypsum board or equivalent. Where the separation is a floor/ceiling

b) Every sleeping room shall have at least one openable emergency escape and rescue opening. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches above the floor. The minimum net clear opening shall be 5.7 SF; the min. net clear opening height shall be 24 inches, and the min. net clear opening width shall be 20 inches

c) Porches, balconies, or raised floor surfaces located more than 30 inches above the floor or grade below shall have guards no less than 36 inches in height. Required guards on open sides of stairs, raised floor areas; balconies and porches shall have intermediate rails or ornamental closures which do not allow the passage of a sphere 4 inches or more in diameter.

d) Smoke alarms shall be installed in each sleeping room and outside each separate sleeping area in the immediate vicinity of the bedrooms. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

6) BARN #2- INDOOR RIDING STABLE (Construction type VB-combustible/Unprotected)

a) The existing building is a pole barn structure with a dirt floor and limited electrical service. Mechanical and plumbing utilities are presently not provided.

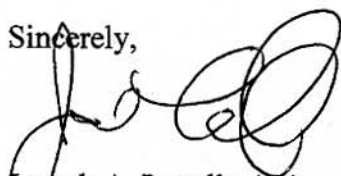
b) This one story 7200 SF structure of the construction type noted is permitted to house most Office, Educational, Light Industrial and Mercantile uses. The proposal of any type of assembly use in all probability would initiate the installation of an automatic suppression system (sprinklers). A more complete assessment can be presented when a specific use of the structure is proposed. All future renovations and upgrades to this structure will be required to be installed and be operational as per the latest version of the adopted building code.

Finally, it should be noted that the degree of code compliance required by the ICC Existing Building Code is influenced by the level and extent of the alterations proposed at a particular time. Alterations are classified as one of the following: Level 1, Level 2, Level 3, or as Repairs. Compliance alternatives and code requirements vary somewhat between these categories. The above-mentioned compliance issues may or may not be required to be altered to conform to current codes depending on the level and location of the renovations proposed. For example, code compliance issues may only be required to be addressed in an area where a minor renovation is proposed while non-conforming issues in other parts of the structure can be

considered in as future phase renovation. However, as a rule of thumb, a change of use for a structure will initiate the most stringent degree of compliance in most cases. These parameters can be verified when a specific scope of work is identified.

If you should have any question concerning the above code compliance issues, please do not hesitate to contact me.

Sincerely,



Joseph A. Laval

Joseph A. Laval AIA
Architect



George J. Donovan AIA
&
Associates
Architects

8 September 2006

Ann E. Yost, RLA
Yost Strodoski Mears
19 South Newberry Street
York, Pa. 17404

RE: Harriet Wetherill Park

Dear Ann,

I am responding to your note of August 7, 2006 concerning the above referenced project. I will respond to your questions in the order that you presented them to me. The responses to your questions are as follows:

- 1) Do the buildings appear to be sound? (It is understood that the project did not include a structural analysis but a general assessment of the soundness of the structure should be included.) Are there cracks in the foundations of concern? Are the floors obviously out of the level?

Answer: All the structures appear to be sound. Visually the floors do not appear to be out of level in the Main dwelling, Caretaker house, and the Apartment. Major foundation cracks of concern are not evident, nor are dry rot of wood joist members.

- 2) Do the systems appear adequate for public use? Will the electric and HVAC need upgraded based on the apparent age/condition of the systems?

Answer: Electric and HVAC services need to be upgraded or replaced in all buildings where they are present. The current HVAC and electric systems appear to be old and their operation incomplete by today's standards in both the Main dwelling and the Caretaker house. The apartment also has aged HVAC and electric systems that need to be upgraded and/or replaced. However, this is the only location where present systems could be phased for future replacement if the apartment remains without an immediate change of use. Obviously, utilities need to be added in the structures that do not have any or minimal services at this time. The addition of adequate heat and central air conditioning is critical to accommodate public use in all structures.



- 3) There are accessibility and egress requirements associated with public use of buildings. Would accommodation of these requirements require substantial alteration to the structure? Would the second floor of the structures be available? Would the alterations be extensive and expensive or easily accommodated?

Answer: As stated in the previous letters, the degree of code compliance required by either the ICC Existing Building Code or ICC Building Code is influenced by the level and extent of the alterations proposed in conjunction with the use decided upon. In short, rules vary from a code compliance standpoint based on these decisions. Therefore, this question(s) is not an easy one to answer without first having some dialogue with the client to establish a building program. In short, one-story structures accommodate accessibility and egress requirements with greater ease because of their grade level location. For two story structures and above, the consideration is the addition of stairs and elevators. Stairs and elevators are added with greater ease, as an attachment addition to an existing structure, while the addition of these elements on the existing interior is more of a structural and increased cost consideration. My feeling is that the both the Main House and the Caretaker House will need the addition of an additional stair but not the addition of an elevator. The second floors of both structures will then ultimately be available for public/employee use. Finally, with existing structures concerning these issues, the pursuing of variances from the code is a viable and common option. However, it is difficult to predict the outcome of what the final decision will be in these cases.

- 4) Were their items of concern you viewed in your field assessment that should be brought to the owner's attention? Signs of wood rot, indications of water damage, evidence of deterioration, etc.?

Answer: No, not in addition to the items already noted.

- 5) Your July 20th letter provides the same assessment for the Existing Dwelling and Shed #1-Caretaker House. These two structures appear to be very different in terms of their usability, basic structure, and even upkeep. Are they equally adaptable to public use?

Answer: From a code standpoint, Shed #1-Caretaker House is a smaller version of the Existing Dwelling. I do not agree that the structures are very different in terms of their usability and basic structure. Both structures are of wood frame construction and the height and area of both buildings are very similar and fall in the same category from a code standpoint in terms of use alternatives, egress requirements, etc. They are both equally adaptable to public use with the resultant being that as both structures stand now, the Existing Dwelling provides slightly more usable square footage than the Caretaker House.

- 6) The owner is very interested in reusing Barn #2-Indoor Riding Stable. The July 20th letter states that this building has the most flexibility for renovation to public use. What elements of the building would typically be retained in a renovation for public use with consideration of the buildings age and appearance? The Phase I Environmental Site Assessment completed by URS noted that the indoor riding building first appears on aerial photographs in 1973. Based on the age of the structure would there be any concern about the deterioration of the wood post that supports the building? Is the existing roof and siding practical for reuse with consideration of life-cycle replacement schedule, winterization, retrofitting with windows/penetrations for vents, etc.? If there is utility remaining in the existing roof and siding, how easily can it be painted? How easily can the corrugated plastic skylights be replaced?

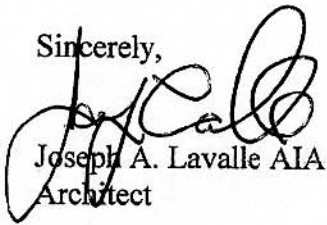
Answer: Prior to renovating the building, an in-depth existing structural investigation should take place to identify any deterioration of the wood structure. There is not any visual deterioration evident at this time. Typically, the basic structure of a pole barn is retained when considering a renovation to occupancy with a controlled interior environment. The existing roof and siding would be removed due to the details required to make the structure energy efficient and useable. To adequately make the structure weather tight and energy efficient, the framing structure would be retained with the exterior wall and roof finishes being removed and replaced. Following the placement of an interior concrete slab with a concrete insulated frost curb around the perimeter of the structure in between the existing posts, infill wood or steel stud framing would be added to support window and door locations, insulation, interior finishes, exterior sheathing and finishes, rough electric distribution, etc. Roof skylights can be replaced with more energy efficient ones within existing openings or new locations can be proposed and framed out without much difficulty prior to a new roof covering being installed.

- 7) Will the investments in any of the structures to renovate them for public uses exceed the current value in your professional opinion-and are their structures that obviously are not worth reinvestment.

Answer: In my letter of July 20th, I recommend that Shed #2, Shed #3, and Barn #3 be Utility or Storage structures, essentially what they are now. The balances of the structures are viable for renovation or renovation with additions for public use from a financial investment and code compliance standpoint in my opinion.

In closing, I hope the above addresses your questions and explains in greater detail the situations that exist with each structure. If you should have any further questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "J. A. Laval", is written over the printed name. The signature is fluid and cursive, with the first name "Joseph" and last name "Laval" being clearly distinguishable.

Joseph A. Laval AIA
Architect



George J. Donovan AIA
&
Associates
Architects

30 November 2006

Ann E. Yost, RLA
Yost Strodoski Mears
19 South Newberry Street
York, PA 17401

Re: Harriet Wetherill Park

Dear Ann;

As a follow up to our phone conversation last week I have done additional research regarding the useful life span of a pole building structure such as the Riding Stable at Harriet Wetherill Park. Previous reports completed by Joe Lavallo from our office indicate that upon visual observation the above grade structure does not appear to be deteriorated. You are correct in being concerned with the conditions of the structural posts below grade. We have indicated that an in depth structural investigation be completed by a structural engineer prior to proceeding with any plans to renovate the building. The township's public works department may be able to excavate around a couple of the existing structural posts to identify the below grade conditions.

I have talked to other members of our staff, a material supplier and a pole building company to better understand the useful life and serviceability of pole barn structures.

While it is difficult to determine exactly what the specifications of the existing posts are the material supplier that I spoke with advised that posts in the early 1970's that were treated for below grade use were rated and warranted for a thirty year life expectancy.

The pole building company I spoke with informed me that in the 1970's most manufacturers warranted their posts for ten to twenty years and metal roof and siding material for ten years. Their experience has shown that many buildings of this age will have posts that are completely rotted if you excavate approximately one foot below grade. Today this manufacturer constructs their buildings using a Perma/Column which is a one foot diameter by four foot deep concrete footing that extends one foot above grade level. They can also retrofit existing buildings with this footing system. Reuse of the existing roof trusses can also be difficult since most trusses on buildings of this type were not designed to carry a dead load that will be imposed if ceiling, lighting and mechanical systems are placed on top of the bottom chord or suspended from the bottom chord. A structural engineering analysis would be required to accurately determine the loading capacity of the roof trusses.

Other members of our staff have experienced a thirty year life span for pole buildings of this type.



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George J. Donovan AIA, partner / H. Joseph Phillips AIA, partner



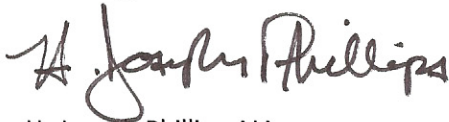
The fact that the existing pole barn is thirty-three years old indicates that it has reached or is fast approaching its useful life span. This coupled with the fact that adaptively reusing the building would require the removal of all existing materials down to the frame and the installation of new foundations, floor systems, wall systems, insulation, interior finishes and roof systems raises questions regarding the economic feasibility of reuse for a building program that requires conditioned interior space. Furthermore, the pole building manufacturer I spoke with informed me that in his experience, if an existing building of this type is found to have structural damage or structural members which are under designed for the proposed future use, it is generally more economical to raze the structure and construct a new structure than it is to repair or reinforce the existing structure. In short, reuse of this building would be limited to a very basic frame of questionable structural capacity and remaining life with little or no economic benefit.

With the above information I feel that if the township wants to construct a structure with durability, permanence and long life they would be better served by selecting another location on the site or by razing the existing pole building and constructing a new structure for the specific and intended use.

In addition to the above I have confirmed with Joe Lavalle that the existing dwelling was constructed with a stone foundation/basement and wood frame construction for the stories above. I have included a copy of a cost estimate from a recent feasibility study we completed to convert a two story residence into a municipal office building. The projected cost on this project was \$98.74 per square foot. I would use \$100.00 per S.F. for budgeting purposes. In addition to this our cost estimating consultant prepared an estimate to connect the two floors with a new code compliant exterior stair tower. The cost of this was estimated to be \$35,000.00.

I hope that the above will help you and Plymouth Township determine a course of action for the buildings and site. As always, if you have any further questions, please do not hesitate to give me a call.

Sincerely,

A handwritten signature in dark ink, appearing to read "H. Joseph Phillips". The signature is fluid and cursive, with the first name "H." being small and the last name "Phillips" being larger and more prominent.

H. Joseph Phillips AIA
Partner