

# Recommended Model Development Principles for Harford County, MD

A CONSENSUS OF THE LOCAL SITE PLANNING ROUNDTABLE

May 2003

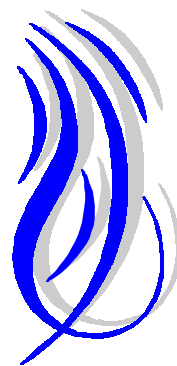
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Center for Watershed Protection  
Alliance for the Chesapeake Bay  
Home Builders Association of Maryland

County



Harford

## Acknowledgments

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- Rowan Glidden: Lot Development
- Kevin Small: Residential Streets and Parking Lots
- Craig Ward: Conservation of Natural Areas

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*Cover photo courtesy of the Harford County Department of Public Works, Water Resources Engineering, 2003*

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# Executive Summary

This document is a product of the Harford County Local Site Planning Roundtable, a year-long consensus process initiated by the *Builders for the Bay* to review existing development codes and identify regulatory barriers to environmentally-sensitive residential and commercial development at the site level. A diverse cross-section of local government, civic, non-profit, environmental, homebuilding, development and other community professionals made up the membership of the Harford County Roundtable. Through a consensus process, members of the Roundtable adapted the National Model Development Principles to specific local conditions. Roundtable recommendations included specific code and ordinance revisions that would increase flexibility in site design standards and promote the use of open space and flexible design development in Harford County.

The National Model Development Principles adapted by the Harford County Local Site Planning Roundtable are designed to collectively meet the objectives of Better Site Design (BSD): (1) reduce overall site impervious cover, (2) preserve and enhance existing natural areas, (3) integrate stormwater management, and (4) retain a marketable product. Code modifications and other Roundtable recommendations were crafted to remove regulatory hurdles and provide incentives, flexibility, and guidance for developers implementing BSD. The roundtable process focused on development at the site level and did not include discussions of zoning or land use. Highlights of the Roundtable recommendations include the following:

## Design of Residential Streets and Parking Lots

- Reduce required pavement width to 18 ft for low density residential access streets
- Require landscaped islands for cul-de-sacs of 55 ft radius
- Encourage alternative turnarounds at street ends by increasing panhandle minimums to 10%
- Establish minimum and maximum parking ratios with provisions for usage of pervious materials and flexibility given site-specific demands
- Reduce parking requirements for areas of mass transit and shared or joint parking
- Increase minimum landscape requirements for parking lots
- Encourage adoption of a tree shading provision as part of a landscaping ordinance for parking lots

## Lot Design

- Require a conceptual design meeting with plan reviewers & designers early in the process (large developments)
- Develop a Traditional Neighborhood District design ordinance as a by-right option in R-1 through R-4 Districts
- Establish 25% minimum passive open space requirement in Conservation Development Standards (CDS) sites
- Reduce frontage and setback minimums in single family detached residential districts
- Increased flexibility in sidewalk requirements to promote pedestrian-friendly networks
- Establish standards for driveway design that direct runoff to pervious areas and reduce impervious cover
- Exempt “passive” community open space from Mowing Ordinance

## Natural Areas Protection

- Remove Natural Resource District (NRD) from private lots
- Eliminate minimum wetland area requirement for NRD protection
- Provide criteria for intermittent stream classification
- Adopt a native plants list for the County



# Introduction

The impacts of watershed urbanization on the water quality, biology, and physical condition of aquatic systems have been well documented (CWP, 2003). Every year, hundreds of thousands of acres of land are altered as a part of the development process. The development radius around many cities and smaller municipalities continues to widen at a rapid rate, far outpacing population growth (Leinberger, 1995). In the Chesapeake Bay Region, it is estimated that more than 90,000 acres of open land are converted annually by development, at a rate four to five times greater per person than that seen 40 years ago (Chesapeake Bay Foundation, 2002).

If we hope to protect the quality of our water resources and the character of our landscape under a continued growth scenario, local governments, developers, and site designers alike must fundamentally change the way land is developed. Deciding where to allow or encourage development, promote redevelopment, or protect natural resources are difficult issues jurisdictions will have to balance. While effective zoning and comprehensive planning are critical, communities should also be exploring ways to minimize the impact of impervious cover, maintain natural hydrology, and preserve contiguous open space on development sites.

Towards this end, the Center for Watershed Protection convened a National Site Planning Roundtable in 1996 to develop a set of model development principals that encourage better design at new residential subdivisions and commercial sites. A roundtable membership consisting of planners, engineers, developers, attorneys, fire officials, environmentalists, transportation, and public works officials from nationally recognized organizations developed and endorsed a set of site planning techniques collectively referred to as Better Site Design (BSD). Products of the National Roundtable include *Consensus Agreement on Model Development Principles to Protect Our Streams, Lakes and Wetlands* (CWP, 1998b), a supporting technical document entitled *Better Site Design: A Handbook for Changing Development Rules in Your Community* (CWP, 1998a), a Codes and Ordinances Worksheet (COW), and a local site planning roundtable process for adapting these techniques at the local level.

The national model development principles upon which BSD is based are merely benchmarks; each community should adapt relevant principles and refine recommendations appropriate to local circumstance. Almost every community can alter some part of its subdivision and development codes to foster development that better protects environmental resources and is economically advantageous for the development community. To promote the local adoption of the model development principles within the Chesapeake Bay region, the Center for Watershed Protection (CWP), the Alliance for the Chesapeake Bay (ACB) and the National Association of Home Builders (NAHB) have formed a coalition called the *Builders for the Bay*. More specifically, the goal of this partnership is to implement local site planning roundtables in 12 communities throughout the Bay region over the next three years.

## Benefits of Applying the Model Development Principles

The model land development principles have documented benefits for both the natural environment and the community. Communities implementing the model principles have realized the following benefits:

- Protected the quality of local streams, lakes, and estuaries
- Generated smaller loads of stormwater pollutants
- Helped to reduce soil erosion during construction
- Reduced development costs
- Increased property values
- Created more pedestrian friendly neighborhoods
- Provided open space for recreation
- Protected sensitive forests, wetlands, and habitats from clearing
- Resulted in a more attractive landscape
- Reduced car speed on residential streets
- Allowed for more sensible locations for stormwater facilities
- Increased local property tax revenues
- Facilitated compliance with wetlands and other regulations
- Promoted neighborhood designs that provide a sense of community
- Preserved urban wildlife habitat

# Why Harford County?

While local site planning roundtables have been completed in other communities, the Harford County roundtable is the first to take place under the auspices of *Builders for the Bay*. The purpose of a local site planning roundtable is to adapt the national model development principles for local application, which is accomplished through a consensus-building process that identifies and modifies local codes and ordinances that act to prohibit or impede better site design. Harford County was selected as the first *Builders* location for several reasons:



- Harford County is within the Chesapeake Bay Watershed
- The County government expressed an interest and was willing to commit staff to the process
- As a “bedroom community” for Baltimore and Wilmington bisected by I-95, Harford County is experiencing significant development pressures
- Completion of the Codes and Ordinance Worksheet (COW) indicated that Harford County’s current development rules are insufficient to protect the County’s water resources and aquatic communities
- The timing was appropriate given the County’s code review and comprehensive plan revision schedule
- The County has just adopted the new Maryland stormwater regulations that provide a credit system linked with better site design techniques
- The Home Builders Association of Maryland (HBAM), Harford County Chapter generated support for the project among its members

## Goals of the Harford County Roundtable

Roundtable members expressed a high level of commitment to the roundtable process and outlined the following goals and expectations for the project:

- Ensure that the roundtable process leads to on-the-ground change in residential and commercial site development practices.
- Provide specific recommendations to the County Administration that will lead to actual code revisions by avoiding broad recommendations and providing text amendments where possible.
- Create incentives for encouraging implementation of Model Development Principles.
- Recommend code changes that provide flexibility for site designers and enhance regulatory certainty and clarity for developers, review staff, and citizen groups.
- Utilize the Harford County Local Site Planning Roundtable as a case study for future consensus building processes and roundtables.

This document presents the resulting recommendations on how these codes might be amended to foster more environmentally friendly and economically viable development in Harford County. Note that the model development principles and recommended code modifications only address planning issues at the site level. To maximize the environmental benefits of these principles, the location of development, agricultural uses, and open space preservation need to be applied and addressed in the context of Zoning Regulations and the Comprehensive Plan.

# The Roundtable Process

Roundtable members convened over an eight-month period to become familiar with the BSD principles, review existing codes and regulations, work in subcommittees, and reach group consensus on a final set of recommendations. The Roundtable consisted of over 30 dedicated members with a wide range of professional backgrounds and experience related to local development issues. Members were divided into three subcommittees, which focused on principles related to streets and parking, lot geometry, and natural areas. The full group met four times over the course of the project period, and each subcommittees had two to three additional separate meetings. The process included the following steps:



1. In **February 2002**, a two-day workshop on Watershed Planning and Better Site Design for the Chesapeake Bay was held in Harford County, sponsored by the Chesapeake Bay Program (pre-Harford County Roundtable).
2. In **September 2002**, a *Builders for the Bay* Local Site Planning Roundtable kick-off meeting was held to reintroduce the National Model Development Principles, review Codes and Ordinance Worksheet (COW) for Harford County, and redesign a local subdivision.
3. In **November 2002**, a more detailed codes analysis was completed. Based on results from the COW, feedback from the September kickoff, and excerpts from existing codes and ordinances, this analysis provided a concise summary of the regulatory barriers to implementing environmentally-sensitive site design in Harford County and served as the foundation for subcommittee discussions. Documents used for the COW and codes analysis primarily fall under jurisdiction of the Departments of Planning and Zoning and Public Works, and included the Zoning Code, Subdivision Regulations and the Roadway and Stormdrain Design Manual.
4. From **November 2002** through **February 2003**, the full Roundtable split up into three subcommittees with diverse interests and expertise represented in each: Residential Streets and Parking Lots, Lot Development, and Natural Areas. Subcommittees met two to three times during this period to develop a set of recommended code changes to present back to full Roundtable.
5. In **February 2003**, subcommittees presented draft recommendations to the full roundtable to begin achieving consensus on final recommendations.
6. In **March 2003**, subcommittees reconvened to modify recommendations based on comments from the full roundtable.
7. In **April 2003**, final consensus was reached at the last full roundtable meeting.

# Membership Statement of Support

This document of recommended development principles was created in conjunction with the diverse cross-section of development, local government, civic, non-profit, environmental, and other community professionals that participated in the *Builders for the Bay* Harford County Site Planning Roundtable. Members of the roundtable provided the technical experience needed to refine the model development principles for Harford County. While the resulting recommendations reflect each member's professional and personal experience with land development, they do not necessarily carry the endorsement of the organizations and agencies represented by the members. Endorsement implies support of the principles and recommendations as a package and does not necessarily imply an equal level of support among individual recommendations by all Roundtable members.

All members of the Harford County Site Planning Roundtable endorse the model development principles presented here.

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# Model Development Principles Recommended by the Harford County Site Planning Roundtable

*The recommendations that follow are formatted to show the model development principles in **bold**, the membership recommendations in plain text, and changes to actual code language in **blue**. Specific modifications to code language appear as ~~strikethroughs~~ or as underlined additions.*

## Overarching Principles

- # 1. **The Department of Planning and Zoning (DPZ) should evaluate existing and explore additional opportunities to promote and encourage infill and redevelopment in the interest of reducing demands on areas outside of the development envelope, bringing improvements to older communities, and protecting existing natural resources. The real costs associated with redevelopment and infill should be assessed.**
- # 2. **A pre-submittal or concept plan meeting for large developments (25 lots or more) between site designers and plan reviewers to encourage the comprehensive application of better site design principles and increase certainty of the approval process should be required.**

## Residential Street and Parking Lot Principles

- # 3. **Design residential streets for the minimum required pavement width needed to support travel lanes; on-street parking; and emergency, maintenance, and service vehicle access. These widths should be based on traffic volume and zoning (lot size).**

The Roundtable members endorse this principle with the following recommendations:

1. Reduce required pavement width for residential access roads serving lot sizes greater than >30,000 sq ft. by changing Roadway Design Standards, Part II(D)5.b.3, pg R-10, as follows:  
  

**For communities with lot sizes greater than or equal to 30,000 square feet, an access street shall be designed as a twenty foot (20') an eighteen foot (18') open section road on a fifty foot (50') right-of way with a six foot (6') graded shoulders or a twenty four foot (24') closed section road on a fifty foot (50') right-of way.**
2. Encourage narrower pavement widths on residential collector and subcollectors where parking is not anticipated or desired under special design conditions (i.e. when there are fewer than typical access points or housing frontages, or when roadway is adjacent to an environmental feature).
3. Harford County Department of Public Works should meet with State Highway Department to encourage flexibility in state standards that require closed section entrances along rural connectors.
4. Pursue reducing on-street parking requirements where sufficient off-street parking can be provided.



#### # 4. Reduce total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length.

The Roundtable members endorse this principle with the following recommendation:

1. Encourage designers to routinely examine alternative layouts by modifying Roadway Design Standards, Part III(C), pg R-12, as follows:

These modifications may be appropriate for roadway alignments that preserve existing natural areas, buffers for width and section adjustments that complement rural character and/or flexible design criteria, or for the use of traffic calming measures to increase pedestrian activity through reduced speed. The goal is to provide, in limited situations at the discretion upon approval of the Director of Public Works, alternatives to the regulations of the Road Code if the plan meets the following objectives:

- 1) The proposed street layout provides a circulation network for reduced traffic congestion or improved neighborhood connectivity.
  - 2) Road sections and streetscapes are designed to reduce traffic speeds, reduce visual impact of parking areas, and promote pedestrian safety.
  - 3) Vehicular and pedestrian connections are provided to existing, or proposed, community retail, civic and recreation facilities.
  - 4) The proposed street layout reduces total street length and impervious cover, and maximizes the number of homes per unit length.
2. Review existing roadway, sidewalk, and pedestrian walkway standards for opportunities to promote or provide incentives for greater neighborhood connectivity.

#### # 5. Minimize the number of traditional residential street cul-de-sacs and incorporate landscaped areas to reduce their impervious cover. The radius of cul-de-sacs should be the minimum required to accommodate emergency and maintenance vehicles. Panhandle lots and alternative turnarounds should be considered at street ends.

The Roundtable members endorse this principle with the following recommendations:

1. Require landscaped islands for cul-de-sacs with 55' paved radius or more by (a) changing "optional island" to "required" in appropriate design charts of Roadway Design Standards Appendix I, Plate 17, and (b) inserting into the Roadway Design Standards, Part III(F)1, pg R-16, the following:

For cul-de-sacs with 55' paved radii, a non-turf landscaped central island, with mountable curb and gutter, shall be installed to reduce the amount of impervious surface (Note that in lieu of landscaping, other appropriate pervious-paver options may be considered). The island shall have a radius of 20'. For cul-de-sacs with paved radii less than 55', a landscaped central island may be permitted provided a minimum 25' paved circulating roadway is maintained.

Due to maintenance and drainage concerns, the island should be crowned and water flow to the outside radius of the cul-de-sac. If necessary to accommodate turning movements for combination vehicles, the island requirement may be eliminated in industrial parks or commercial locations. An agreement shall be executed with the appropriate Homeowners Association to maintain the island's landscaping.

Where appropriate, as specified by the Director of Public Works or his/her designee, the cul-de-sac island may be used for water quality treatment. In such a case the paving will be sloped from the outside edge of the cul-de-sac toward the inside. Under this scenario, the following design modifications and maintenance criteria must be met:

1. [The drainage from the approaching road segment toward the cul-de-sac shall be captured in the drainage ditch of open section roads and in inlets of closed section roads. In either case, no flow shall be allowed to enter the cul-de-sac from the outside edges of the approaching road segment.](#)
  2. [Mountable curb shall be constructed around the island and include curb cuts or approved at-grade edging or border to permit water to enter the pervious area.](#)
  3. [Appropriate design and sizing criteria for bio-retention areas, including proper soil amendments and plant species, as outlined in Stormwater Design Manual shall be identified.](#)
  4. [A legal stormwater easement shall be placed on the island whereby the HOA is responsible for all associated facility maintenance.](#)
2. Require landscape island vegetation to meet existing utility requirements (i.e., no trees within 15 feet of the water main).
  3. Increase current 5% maximum on panhandle lots to 10%. In special circumstances, increases in the number of allowable lots per panhandle group may be granted upon approval of Water and Sewer and the Director of Planning and Zoning, taking into consideration overall site design, utilities, and potential homeowner conflicts.

**# 6. Where density, lack of utility conflicts, topography, soils, and slope permit, vegetated open channels should be used in the street right-of-way to convey stormwater runoff.**

The Roundtable members endorse this principle with no recommended changes to existing codes and ordinances.

**# 7. The required parking ratio governing a particular land use or activity should be enforced as both a maximum and a minimum in order to curb excess parking space construction. Existing parking ratios should be reviewed for conformance taking into account local and national experience to see if lower ratios are warranted and feasible. Pervious materials should be utilized in infrequently used or spillover parking areas.**

The Roundtable members endorse this principle with the following recommendations:

1. Exclude additional common areas from floor area estimates by modifying Zoning Code, Section 267-25 (A)2, page 63, as follows:

[Parking and loading requirements based on floor area shall be determined by the total gross floor area of the use, excluding incidental storage, mechanical areas, and preparation areas, and additional common areas such as corridors, stairwells, and elevators.](#)
2. The Harford DPZ should review and modify existing minimum off-street parking ratios in Zoning Code Section 267-25 (D), page 65-67 to reflect average local traffic demand. DPZ should also consider further defining some of the more ambiguous uses (i.e. more office or retail types). Example ratio modifications include:
  - Retail - change 1/150 sf to 1/200 sf
  - Banks - change 1/150 sf to 1/300 sf
  - Groceries - reduce 1/150 sf to 1/200 sf
  - Roadside stands - reduce 1/150 sf to 1/250 sf
  - Shopping Center - 1/250 sf for all gross floor sizes
  - Churches - 1/3 seats; up to 50% can be pervious (structural); schools and daycare computed separately
3. Once appropriate parking minimums are set, a maximum parking ratio should be established as a percentage of the minimum for all defined uses in Zoning Code Section 267-25 (D). Any additional parking above this maximum should be constructed in structured pervious material unless individual site conditions or use can be proven to require additional paved areas.

4. Insert definitions of pervious surfaces and structured pervious surfaces into Zoning Code Section 267-4, page 24:

PERVIOUS SURFACE: Any surface that allows for the infiltration of water.

STRUCTURED PERVIOUS SURFACE: Any approved porous pavement or modular pavers that allow the infiltration of water and resist compaction due to associated vehicular activities. Such structured surfaces may include, but shall not be limited to, porous asphalt or concrete, modular block systems, and grass or gravel pavers.

## **# 8. Parking codes should be revised to lower parking requirements where mass transit, structured parking, or enforceable shared parking is available.**

The Roundtable members endorse this principle with the following recommendations:

1. Apply 10-20% parking reduction incentives, which are currently limited to the CRD, county-wide by moving Zoning Code, Section 267-41.2 (N), pg 220-E, to general use in Section 267-25, page 64. Modifications to allow for reductions based on shared parking arrangements should be made as follows:

Section 267-25(E) The off-street parking requirements for any given use shall be established as per Section 267-25D of the Harford County Zoning Code. The Zoning Administrator, with concurrence from the Director of the Department of Public Works, may:

(1) Authorize a modification of the parking space requirements if he/she determines that, in the particular case, the specific nature of the use or the exceptional shape or size of the property or the other exceptional situations or condition warrants such a modification. Such a modification shall not reduce the number of parking spaces to less than 80% of the required spaces.

(2) If pedestrian access or linkages to mass transit as defined by the County Transportation Element Plan are provided on site from the public right of way to the primary building, the required parking standards may be reduced by up to 10%. If non-residential joint parking is provided, in accordance with provisions established per Section 267-25C, the required parking standards may be reduced up to 20%. This reduction may be utilized in addition to any parking reduction authorized through Section 267-25E(1) Section 267-41.2N(1).

2. CRD shared parking provisions detailed in the Zoning Code, Section 267-41.2 (N), pg 220-E, should be applied county-wide and moved to Section 267-25.

## **# 9. Provide meaningful incentives to encourage structured and shared parking to make it more economically viable.**

The Roundtable Members endorse this principle with no specific recommendations.

## **# 10. Wherever possible, provide stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.**

The Roundtable members endorse this principle with the following recommendations:

1. Increase minimum landscape requirements for parking lots based on the number of spaces provided by modifying Section 267-25 B(2), page 64; as follows:

Five percent (5%) of the required parking area shall be landscaped in lots with less than 20 spaces; eight percent (8%) in lots with 20-100 spaces; and 12% for lots with over 100 spaces. The parking area shall be set back a minimum of five (5) feet from collector road rights-of-way and ten (10) feet from arterial road rights-of-way ten (10) feet from arterial road rights-of-way and five (5) feet from other public road rights-of-way.

2. Encourage widespread use of landscaped parking islands as bioretention areas for treating parking lot runoff, by adding existing language from Section 267-41.2 to Section 267-25 B(2) as follows:

Section 267-25 B(6) Wherever possible practical, the parking islands shall be designed to also serve as a bioretention area for stormwater runoff.

3. Given the benefits of parking lot shading, the Department of Planning and Zoning should consider development and adoption of a tree shading provision for parking lots as part of a landscape ordinance (see Principle #20).

## Lot Design Principles

### **# 11. Advocate open space design development incorporating smaller lot sizes to minimize total impervious area, reduce total construction costs, conserve natural areas, provide community recreational space, and promote watershed protection.**

The Roundtable members endorse this principle with the following recommendations:

1. In addition to the Flexible Development Design provisions that provide for open space designs, develop a Traditional Neighborhood Development (TND) design ordinance as a by-right option in Districts R1 through R4. A multi-stakeholder team should be created to develop TND standards that would afford both flexibility in design and added certainty of plan approval.
2. Establish a 25% minimum on passive open space requirements in Conservation Development Standards (CDS) sites by inserting the following into Zoning Code Section 267-46 (1)(B):

(6) In Conservation Development projects where remaining lands are not in active farming, passive open space shall be provided as follows:

<u>District</u>	<u>Minimum Open Space</u> <u>(% non-active farming parcel)</u>
<u>AG</u>	<u>25%</u>
<u>RR</u>	<u>25%</u>

### **#12. Relax side yard setbacks and allow narrower frontages to allow greater flexibility of design. Relax front setback requirements to minimize driveway lengths and reduce area of grading for house construction.**

The Roundtable members endorse this principle with the following recommendations:

1. Reduce the front yard setback to 10 feet for housing with no garage, with side garage, or with rear garage, if off-street parking is provided (Section 267-23 (C)2).
2. Adjust allowable encroachment distances for decks into unencumbered parts of rear and side setbacks to accommodate reduced rear yard setback minimums by modifying Section 267-23 C (1)a[6], page 57.
3. Modify current allowable distances between building blocks to account for sprinkler system use by adding to Section 267-36 C(2)(j), page 140, the following:

For buildings with sprinkler systems, the minimum distance between end walls of sprinklered buildings (regardless of window presence) shall be 30 feet.

4. Reduce the following setback requirements for urban residential districts (single family detached) as outlined in the table that follows.



<b>Setback Requirements for Urban Residential Districts (Single Family Detached)</b>					
<b>Zone</b>	<b>Minimum Lot Area</b>	<b>Minimum Front Yard Setback</b>	<b>Minimum Rear Yard Setback</b>	<b>Minimum Side Yard Setback</b>	<b>Minimum Frontage @ Bldg. Setback</b>
R	1 acre	50 ft 25	60 ft	40 ft 6 ft; total of 20	150 ft 80
R1	Conv. 20,000 ft <sup>2</sup>	40 ft 25	50 ft	15 ft 6 ft; total of 20	100 ft 80
	COS 15,000 ft <sup>2</sup>	35 ft 25	40 ft	10 ft 6 ft; total of 20	80 ft 75
R2	Conv. 10,000 ft <sup>2</sup>	35 ft 25	40 ft 22	10 ft 6 ft; total of 20	70 ft 60
	COS 7,500 ft <sup>2</sup>	30 ft 25	35 ft 22	10 ft 6 ft; total of 20	65 ft 55
R3/R4	Conv. 7,500 ft <sup>2</sup>	25 ft 22	35 ft 22	10 ft 6 ft; total of 16	60 ft 50
	COS 6,000 ft <sup>2</sup>	25 ft 22	30 ft 20	8 ft 6 ft; total of 16	55 ft 45

**#13. Promote more flexible design standards for residential subdivision sidewalks. Where practical, consider locating sidewalks on only one side of the street and providing common walkways linking pedestrian areas.**

The Roundtable members endorse this principle with the following recommendation:

1. Provide for a system of pedestrian travel at all development sites that is not restricted by road codes. All options should be permissible by right and all lots must be served by the system. (Road Code, page R-35 Sidewalks; may also insert language into Zoning Code Section 267-22, page 51).
2. Eliminate the requirement for concrete sidewalks along both sides of a roadway when each lot is provided access to an alternative pedestrian pathway system (Road Code, page R-35). Directors and staff of Public Works and Planning and Zoning should further discuss the implications of such a modification.

**#14. Reduce overall lot imperviousness by promoting alternative driveway surfaces and shared driveways that connect two or more homes together.**

The Roundtable members endorse this principle with the following recommendations:

1. Driveway designs should route water runoff to pervious areas (crowned driveways) or reduce the amount of water reaching adjacent streets through techniques that intercept water flow (Section 267-25, page 63).
2. The county should adopt a stormwater credit for implementation of designs noted in #1 under this principle.
3. Establish a maximum width of 10 feet for driveways that exceed 50 feet in length (measured from right-of-way of parking areas to street edge).
4. Establish standards to allow for the use of pervious materials in driveway design, including grates, two track design or any other technique that does not succumb to compaction. Gravel shall not be allowed as an alternative pervious surface because it becomes impervious after repeated usage (see “structured pervious” definition in # 6).

**#15. Clearly specify how community open space will be managed and designate a sustainable legal entity responsible for managing both natural and recreational open space.**

The Roundtable members endorse this principle with the following recommendations:

1. Allow for the common open space areas outside of NRD to be maintained as meadows or other native landscaping by modifying County's mowing ordinance (Code 109-6) as follows:
  - B. This section does not apply to land that is:
    - (1) Devoted to agricultural use;
    - (2) Designated as a wildlife preserve by a government agency;
    - (3) Identified as a Natural Resource District as established under Section 267-41D of the Harford County Code;
    - (4) Identified as a habitat protection area within the Chesapeake Bay Critical Area Overlay District as established in Section 267-41.1 of the Harford County Code; or
    - (5) Identified as an afforestation, reforestation, or forest retention area on the record plat for the lot or parcel;
    - (6) Identified as "passive" community open space
2. In rural residential districts, encourage the creation of open space or conservation areas that are owned and managed by a single party (Section 267-29 B (2), page 83).
3. Disallow Natural Resource Districts on privately owned urban residential lots (Section 267-41 D (3), page 180). See Principle # 18.

**#16. Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and avoid routing rooftop runoff to the roadway and the stormwater conveyance system.**

The Roundtable members endorse this principle with the following recommendations:

1. For detached structures, rooftop runoff should be directed to pervious areas only and not routed to roadways or other impervious conveyance systems.
2. The County should conduct periodic educational workshops related to disconnected stormwater management systems for all audiences (engineers, developers, builders, homeowners, county agencies).
3. The Department of Public Works and the Department of Inspections, Licenses, and Permits should establish standards for the use of green roofs in the design and construction of buildings. The County should aggressively publicize the opportunity to use green roof technology for stormwater credits available under the MD Stormwater Management program.

## Natural Area Principles

**#17. Maintain a naturally vegetated buffer system along all perennial streams that also encompasses critical environmental features such as the 100-year floodplain, steep slopes and freshwater wetlands with the intention of improving water quality, preventing bank erosion, and providing wildlife habitat.**

The Roundtable members endorse this principle with the following recommendations:

1. Revise the Natural Resource District (NRD) Stream Buffer requirements by changing the Zoning Code, Section 267-41 (D)2, pages 179-180, as follows:

Application. The Natural Resource District shall apply to the following features:

Streams: including Broad Creek, Bynum Run, Carsins Run, Deer Creek, Grays Run, Ahha Branch, Herring Run, Little Gunpowder Falls, Rock Run, Peddler Run, Swan Creek, Winters Run and their tributaries, as identified on the Harford County Hydrology Map (1976 Revised Maryland Geological Survey Base Map 1:62,500). Tributaries to the above streams which drain a subbasin of more than four hundred (400) acres are included in the Natural Resource District Stream designation. The acreage of a subbasin is determined at the point of confluence with another stream identified on the County Hydrological Map. The Natural Resources District area for stream protection shall be a minimum distance of one hundred fifty (150) feet on both sides of the center line of the stream or fifty feet beyond the one-hundred year floodplain, whichever is greater, and along their tributaries for a minimum of seventy-five (75) feet on both sides of the center line of the tributary. The Natural Resource District for all perennial and intermittent streams, shall be a minimum of seventy-five (75) feet on both sides measured from the top of the streambank OR fifty (50) feet beyond the 100 year floodplain, whichever is greater. For all streams that have a drainage area of more than four hundred (400) acres, the Natural Resource District shall be expanded to a minimum distance of one hundred fifty (150) feet on both sides, measured from the top of the streambank OR fifty (50) feet beyond the 100 year floodplain, whichever is greater.

2. Replace definition of intermittent and perennial streams with the following language in the Zoning Code, Section 267-4:

INTERMITTENT STREAM: surface waters, contained within a defined channel or bed that flow at least once per year. A stream that has been confirmed to be an intermittent stream through field verification, for purposes of these guidelines, includes two or more of the following characteristics: (1) Defined or distinct channel; (2) hydric soils or wetlands within or adjacent to channel; (3) hydraulically sorted sediments; (4) removal of vegetative litter; or (5) loosely rooted vegetation by the action of moving water.

PERENNIAL STREAM: a stream containing water throughout a year of average rainfall that has been confirmed to be a perennial stream through field verification.

3. Revise County stream buffer requirements map to reflect the changes as stated above.
4. Revise the Nontidal Wetlands definition to be consistent with the U.S. Army Corps of Engineers' and State's definitions by changing the Zoning Code, Section 267-4, page 22, as follows:

Nontidal wetlands [Added by Bill No. 85-12; amended by Bill No. 88-21] – All palustrine aquatic bed, palustrine emergent, palustrine forested and palustrine scrub-shrub wetlands as defined by the United States Fish and Wildlife Service, except tidal wetlands regulated under Title 9 of the Natural Resources Article, Annotated Code of Maryland. These nontidal wetlands are lands where the water table is usually at or near the surface (i.e., periodically saturated) or areas where the substrate or soil is covered by shallow water at some time during the growing season. They are further characterized by one (1) or both of the following two attributes:

A. The land supports predominantly obligate or facultative wet hydrophyte plant species cited in the Department of Natural Resources publication entitled "Vascular Plant Species Occuring in Maryland Wetlands."

B. The substrate is predominantly hydric soil.

that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The technical guidelines for determining the three parameters of nontidal wetlands, (vegetation, soils, and hydrology) shall be followed in accordance with the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual.

5. Eliminate the minimum wetland area requirement for NRD protection by changing the Zoning Code, Section 267-41 D(2)(b), page 179 as follows:

(b) ~~Marsh areas~~ Non-tidal wetlands: any area of nontidal wetlands exceeding forty thousand (40,000) square feet, including but not limited to areas designated as “areas of critical state concern” by the Maryland Department of State Planning. The Natural Resource District boundaries under this provision shall include buffers described in Subsection D(5)(e) below.

For ease of reference, consider moving 267-41 D (5)(e) where 75 ft wetland buffer is defined to 267-41 D(2)(b) under NRD application where other buffer widths are defined. This change would replace last sentence in 267-41 D(2)(b).

**#18. The riparian stream buffer should be preserved or restored with native vegetation that can be maintained throughout the plan review, delineation, construction, and occupancy stages of development.**

The Roundtable members endorse this principle with the following recommendations:

1. Ensure that no portion of the Natural Resource District (NRD) is allowed within privately owned Urban Residential District lots, by inserting language into the Zoning Code, Section 267-41 (D)5, page 182:

(10) No portion of the Natural Resource District shall be allowed within privately-owned urban residential district lots. In lots adjacent to the Natural Resource District, rear yard setbacks may be reduced up to fifty percent (50%) but in no case shall be less than twenty (20) feet.

2. The Harford County Department of Planning and Zoning should look into creating a sliding scale so that a proportional decrease in the lot size can be made in addition to the setback reduction. Once this has been created, it should be added to the above language.
3. Notification regarding the NRD shall be in all contracts of sale for properties in Harford County.
4. As a condition of a subdivision containing NRD areas, the HOA covenants and restrictions shall include a description of the NRD and outline requirements for long-term maintenance. No activity other than what is stated within the Harford County Zoning Code or state regulations shall be permitted within the NRD.
5. Use restrictions and permitted uses within the NRD should be revised to reflect the following:

There shall be no impact to the NRD with the following exceptions:

- (a) Basic maintenance, including native plantings and invasive species removal.
  - (b) Passive recreation. Alteration of the natural environment and removal of surface vegetation in these areas shall be prohibited with the exception of selective clearing to accommodate passive recreation.
  - (c) Utility transmission facility.
  - (d) Road and Driveway Crossings. The number of road and driveway crossings shall be minimized. If a road or driveway crossing is necessary, it shall cross the stream at a ninety (90) degree angle whenever possible.
  - (e) Stormwater management facilities.
6. County staff and other key stakeholders should work together in establishing provisions to allow for minimal, temporary, site grading flexibility within the NRD during the construction phase. Specific criteria should be developed and implemented in concert with other changes to the NRD. Criteria should include and expand upon the following: (1) no impact to trees, floodplain, wetlands, or buffer function; (2) replanting/enhancement of area with native vegetation; and (3) maximum area of disturbance and encroachment distance.



7. Provide a definition for passive recreation by inserting the following language in the Zoning Code, Section 267-4:

PASSIVE RECREATION: Outdoor recreation that does not require significant maintenance or facilities, such as walking, picnicking, viewing, and environmental education activities.

**#19. Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed to build lots, allow access, and provide fire protection.**

The Roundtable members endorse this principle with the following recommendation:

1. Harford County Department of Planning and Zoning should consider strengthening forest conservation language such that any significant modification to an undeveloped, grandfathered subdivision would require reevaluation of forest conservation requirements.

**#20. Conserve trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native plants. Wherever practical, manage community open space, street rights-of-way, parking lot islands, and other landscaped areas to promote natural vegetation.**

The Roundtable members endorse this principle with the following recommendations:

1. The Harford County Department of Planning and Zoning should revise the existing native plant list using the Maryland Department of Natural Resources' native plant list as a guide.
2. The Harford County Department of Planning and Zoning should create and adopt a commercial landscaping ordinance. The landscaping regulations should include a tree shading provision and encourage the use of bioretention facilities.

**#21. Explore new and innovative incentives and flexibility to promote the conservation of stream buffers, forests, meadows, and other areas of environmental value.**

The Roundtable members endorse this principle with the following recommendation:

1. The Harford DPZ should establish a post-Site Planning Roundtable committee that would continue to explore incentives and flexibility to encourage better site design and the conservation of natural areas. Subcommittee should draw from experience of Roundtable members.

*For more information on the Builders for the Bay program, visit [www.buildersforthebay.net](http://www.buildersforthebay.net).*

# Builders for the Bay

*Builders for the Bay* is a partnership formed in December 2001 by the Center for Watershed Protection, the Alliance for the Chesapeake Bay, and the National Association of Home Builders. The primary mission of *Builders for the Bay* is to convene local builders, developers, environmental groups, governments, and other important stakeholders in locality-specific site planning roundtables to look critically at existing local development codes and ordinances. More specifically, the goal of *Builders for the Bay* is to implement local site planning roundtables in 12 communities throughout the Bay region over the next three years. More information and resources related to the Builders for the Bay program can be accessed at <http://www.buildersforthebay.net>.

## Center for Watershed Protection



Founded in 1992, the Center for Watershed Protection is a non-profit 501(c)3 organization dedicated to protecting and restoring watersheds through effective land and water management. Joining forces with local watershed groups, federal and local governments, and nationally respected experts, the Center has developed a multi-disciplinary strategy to watershed protection that includes conducting research, developing watershed management practices, encouraging watershed planning and implementation, fostering watershed learning, and building the capacity of local watershed organizations.

Oversight of the Center is provided by a Board of Directors and a national watershed advisory council, whose members are leaders in the watershed protection arena. Since its inception, the Center has provided technical assistance to local governments in 30 states and the District of Columbia.

For more information on the Center for Watershed Protection, visit <http://www.cwp.org>.

## Alliance for the Chesapeake Bay



The Alliance is a regional non-profit organization that fosters partnerships for the restoration of the Bay and its rivers. The Alliance is known as the “Voice of the Bay” for its objective, unbiased information on Bay-related issues. Since 1971, the Alliance has been involved with the following efforts:

- Helping to build consensus on Bay policies
- Engaging volunteers in important hands-on restoration projects
- Educating citizens about the Watershed
- Strengthening the capacity of grassroots watershed organizations

Over the years, the Alliance has hosted and coordinated a variety of conferences and training events. Typically, the Alliance role is one of a convener and facilitator, bringing the experts in a particular field to the table for the benefit of information exchange. Most of the conferences and forums coordinated by the Alliance have required strong skills in negotiation, consensus-building and organization. This is due to the fact that these events involved representatives from both public and private stakeholder groups. More information on the Alliance for the Chesapeake Bay can be accessed at <http://www.alliancechesbay.org>.

## Home Builders Association of Maryland



The Home Builders Association of Maryland, chartered by the National Association of Home Builders in 1943, is dedicated to serving the entire building and housing industry. To improve the business climate for its members, HBAM encourages and promotes the following:

- The growth, strength and image of the building and housing industry by providing governmental advocacy, networking and social opportunities, education and information, and positive public relations
- The goodwill, confidence and support of its members, the general public and government agencies at all levels; the highest professional standards in the building and housing industry
- Member involvement in the communities in which they live and do business
- The proactive development of laws, regulations, and standards that affect the building and housing industry
- The production, preservation and management of variety of quality housing and commercial buildings to meet the various needs of our communities

Visit <http://www.homebuilders.org> for more information on the Home Builders Association of Maryland.

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# Builders for the Bay

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