Haywood Growth Readiness Roundtable Draft Recommendations

This document contains the draft recommendations from the Haywood Growth Readiness Roundtable. Three working groups of the Haywood County Growth Readiness Roundtable developed draft recommendations in June and July 2007. The larger Roundtable group came to consensus on changes and additions to the recommendations at their August 8, 2007 workshop. The three working groups used the Center for Watershed Protection's Guidebook for Better Site Design as a baseline text, reviewing information provided for each of 22 principles of better site design, as well as other information specific to North Carolina (including NC Division of Water Quality's Stormwater Best Management Practice Manual and NC State University educational resources). Their intention was to investigate and recommend if and how these 22 principles might be adopted in Haywood County, enabling the use of better site design and low impact development techniques, and providing improved protection of natural resources as Haywood County continues to grow.

The three groups focused on different categories of the 22 principles:

- Streets and Parking
- Lot Design
- Natural Areas

In this document, the numbered principle, as listed in the Better Site Design Guidebook, is followed by the related recommendations that were agreed upon by the August 8 Growth Readiness Roundtable participants..

These recommendations are draft in nature. All Haywood County Growth Readiness Roundtable participants are invited to review these recommendations to see if they can live with them, discuss them with their own constituencies, and send any additional suggestions or concerns for inclusion by September 7, 2007. Send comments via email to Christy_perrin@ncsu.edu or by fax to Christy at (919) 515-4542.

We seek to help participants reach consensus on recommendations that they, and the organizations they represent, can live with. After September 7, we will compile a report that includes an introduction, a description of the Growth Readiness Roundtable process, a list of participants, and the final recommendations.

The final Growth Readiness Roundtable is scheduled for Thursday, October 4, 2007 from 8:30 a.m.- 12:00 p.m. at the Haywood County Extension Center. Participants will have an opportunity to determine action items for implementing their final recommendations.

#1 Street Width: 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.

Recommendations:

1) Use traffic volume to delineate roads as collector, arterial, highway, etc.
2) Width should take into account vehicle sizes, with potential wider curves to address large vehicles (Raccoon Road is an example).
3) Examine where bike lanes are appropriate.
4) Allow narrower one-way roads with turnouts in subdivisions on steep slopes for roads serving few houses.
5) Mitigate stormwater increase from ~~larger~~ streets, including the parking and shoulder areas, ~~width requirements~~ with stormwater BMPs.

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

Recommendations:

1) Reduce the total length of residential streets by examining alternative street layouts to determine the best option for increasing the number of homes per unit length. Street standards promote the most efficient street layouts that reduce overall street length.
2) Require evaluation and minimization of street length and width as part of subdivision plan approval process, while keeping aware that longer roads may be necessary in order to minimize impacts to steep slope areas.
3) Reduce road frontage requirements to encourage more dense development (also see principle #12)

#3 Right-of-Way Width: Wherever possible, residential street right-of-way widths should reflect the minimum required to accommodate the travel-way, the sidewalk, and vegetated open channels. Utilities and storm drains should be located within the pavement section of the right-of-way wherever feasible.

Recommendation: Group disagreed with the principle, instead preferring to focus upon reducing pavement width, not right of way.

#4 Cul-De-Sacs: Minimize the number of 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. Alternative turnarounds should be considered.

Recommendations:

1) Minimize the number of 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. Consider alternative turnarounds.

2) Encourage loop roads where applicable.

#5 Vegetated Open Channels: Where density, topography, soils, and slope permit, vegetated open channels should be used in the street right-of-way to convey and treat storm water runoff.

Recommendations:

1) Where density, topography, soils, and slope permit, use vegetated open channels in the street right-of-way to convey and treat storm water runoff.

2) Where appropriate, use low maintenance native plants that provide forage for birds, butterflies, and other beneficial insects. Plant selection should consider traffic volume and speed to minimize impacts with birds and insects.

3) New developments that use vegetated open channels and divert parking lot runoff to stormwater BMPs (principle #10) should receive stormwater credits.

4) Use NCDWQ accepted BMP design standards for swales.

#6 Parking Ratios: 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. Review existing parking ratios for conformance taking into account local and national experience to see if lower ratios are warranted and feasible &
#7 Parking Codes: Parking Codes should be revised to lower parking requirements where mass transit is available or enforceable shared parking arrangements are made.

Recommendations:

1) Parking ratios should be specific to land use.

2) Maximum ratios should be set for each land use. Going above the minimum ratio should require a compelling reason.

3) Going below the minimums should be allowed on a case by case basis.

4) Encourage shared parking.

5) Allow shared parking between residential & business owners

6) On street parking should count toward meeting minimum parking ratios, with multiple businesses counting same spaces.

#8 Parking Lots: Reduce the overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using pervious materials in spillover parking areas.

Recommendations:

1) Minimum stall width less than 9 feet, with approval required for 9 feet or wider.

2) Minimum stall length less than 18 feet, with approval required for 18 feet or longer.

3) Thirty percent (30%) of spaces in large lots should be designed for smaller (compact) cars.

4) Pervious materials should be used for spillover parking.

5) Landscaping should be designed to shade the parking lot.

6) Require bicycle parking close to the building.

#9 Structured Parking: Provide meaningful incentives that encourage structured and shared parking by making it more economically viable.

Recommendations:

1) Structured parking should be utilized in multistory buildings in urbanized areas.

2) Encourage architectural designs that include parking beneath structures where appropriate.

#10 Parking Lot Runoff: Wherever possible, provide storm water treatment for parking lot runoff using bio-retention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.

Recommendations:

1) All parking lot runoff should be directed to stormwater BMPs such as bioretention areas, filter strips, or grassy swales for stormwater treatment.

2) Landscaped areas should also serve to handle stormwater.

#11 Open Space Development: Advocate open space development that incorporates smaller lot sizes to minimize total impervious area, reduce total construction

Recommendations:

1) Educate the public/developers/realtors about open space design, and market it to homeowners to increase its popularity.

2) Encourage allowing the maximum size of the footprint of the dwelling to be based on the size of the lot. The topography of western NC promotes site specific planning.

~~3) Increase public relations to make homeowners want open space, to make it a popular thing to do.~~

4) Encourage open space design before property is put on the market. The realtors and buyers will have a better understanding of what land is usable and be more realistic on pricing. Steep slope areas are generally the areas put into open space. Other ideal areas are wetlands ~~and areas with poor soils~~. This could be a required disclosure.

5) Make open space usable by and accessible to residential communities.

6) Provide a density bonus for additional open space conservation.

7) Define open space as natural (forested) or semi-natural (farmland), as compared to ball fields or golf courses, for example.

8) Require deed restrictions for open space and include requirements for ownership and maintenance. Maintenance could be required of homeowners associations, or in some cases may need to be County or Munical, or through a land trust.

~~Unanswered questions (participants can provide feedback if additions to recommendations desired):~~

~~1. Who would maintain the open space?~~
~~2. Who would enforce the ordinances and make sure the developer is following the plans?~~
~~3. What are the emergency and utility requirements that need included in the design?~~

#12 Setbacks and Frontages: Relax side yard setbacks and allow narrower frontages to reduce total road length in the community and overall site imperviousness. Relax front setback requirements to minimize driveway lengths and reduce overall lot imperviousness, costs, conserve natural areas, provide community recreational space, and promote watershed protection.

Recommendations:

1. Educate the public and make the LID principles easily available to the public, even use flow charts to allow for easier understanding of the material.

2. Encourage the use of irregular lot shapes.

3. Encourage building houses close to road to have more open/play space ~~in the backyard~~.

4. Find sustainable funding, such as county or municipal funding, to support Haywood Waterways' Resource Assessment for Mountainside Development project and make it accessible to all developers.

5. Encourage allowing the maximum size of the footprint of the dwelling to be based on the size of the lot. The topography of western NC promotes site specific planning.

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

Recommendations:

~~1) Do not recommend sidewalk standards for county subdivisions.~~

2) Recommend design standards based on street/neighborhood function.

3) Encourage the use of LID principles for subdivisions within town limits for maintenance, minimum width, stormwater drainage, pervious surfaces, and sidewalks on only one side of the street.

4) Allow alternative options, including grass trails and greenways, for pedestrian travel.

5) Sidewalks should be constructed when they ~~connect two points and have a destination~~ can promote pedestrian use and connectivity, and developers should be held responsible for providing easements, funding and building them when they can provide that connectivity. Discourage "sidewalks to nowhere".

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

Recommendations:

1) Encourage the use of LID principles for driveway design, as related to stormwater drainage, length, width, and pervious surfaces.
~~2) Encourage programs to educate developers on LID principles.~~ (moved to implementation section)
3) Allow shared driveways in residential areas to be considered driveways and not streets.

#15 Open Space Management: Clearly specify how community open space will be managed and designated a sustainable legal entity responsible for managing both natural and recreational open space.

Recommendations:

1) Guidelines should be established differently for municipally owned land vs. homeowners associations vs. public lands vs. developer owned land; and differentiations for developed land vs. undeveloped land.

2) Percentages of allowable open space and pervious space should be established based on ~~zoning~~ land use planning, slope and natural vs. developed space.

3) Homeowners associations should have final say through established legal documents supported by the courts. Guidelines should fall within limitations set by the town or county in which the subdivision resides.

4) Public lands should be controlled by the managing entity (i.e., county, state, town, and federal) again with established legal documents supported by the courts.

5) Land being developed by a developer should fall within the restrictions set by the town or county in which the land resides, taking into consideration whether the area will become managed by a homeowners association in the future.

#16 Rooftop Runoff: Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas and avoid routing rooftop runoff to the roadway and the storm water conveyance system.

Recommendations:

1) Encourage the use of LID principles to manage rooftop runoff and direct it to pervious surfaces, surface drainage, subsurface drainage, bioretention areas, rain barrels/cisterns, and landscaping.
2) Encourage vegetated (green) roofs to slow and reduce runoff, promoting the use of plants that provide food for beneficial insects..
3) Strongly encourage keeping stormwater on-site.

#17 Riparian Area Management (Buffer system): Create a variable width, naturally vegetated buffer system along all perennial streams that also encompasses critical environment features such as the 100-year floodplain, steep slopes and freshwater wetlands.

Riparian Management Area: This is the interface between land and water - the land on either side of a waterbody that contributes to the overall health of the water.

Recommendations:

1) All recommendations apply when there is a change in land use (i.e. farmland is converted to housing development). All existing land uses are exempt from these recommendations.

2) Native vegetation should be used in the riparian management area, with forested vegetation strongly encouraged over primarily grass. ~~Non-native~~ invasive species should be prohibited from use and the county and/or municipalities should distribute a list of these prohibited plants.

3) Riparian management areas should be a minimum of 30 feet of undisturbed forested vegetation (measured from the top of bank) on each side of perennial streams and ~~should be encouraged o~~n intermittent streams, wetlands and bogs. Incentives should be offered for wider riparian areas, particularly on high use value waters, such as trout waters, recreational waters, headwater areas, or waters that contain rare or sensitive species.

4) Averaging is allowed for riparian management areas.

5) Any new development plan should clearly define riparian management areas and these areas should be included in any permits. Riparian areas should be clearly designated on-site and county/municipal staff should ensure compliance by occasional site visits.

6) Riparian management areas should be extended for land with steep slopes. As an example, ~~For slopes of 0-10%, the width should be 30 feet.~~ for every additional percent slope over 10%, an additional 1 foot could be added to the base of 30 feet. In this example, a slope of 15% would have a base riparian area width of 30 feet plus an additional 5 feet for the extra slope, resulting in a 35 foot riparian management area. Other site-specific methods for addressing the need for greater widths in steep slope areas are possible as well.

7) The 100-year floodplain should be protected from hazardous materials and fill. Potential sources of contamination such as hazardous or ~~municipal~~ solid waste facilities and animal waste lagoons should be located outside of the 100-year floodplain. There should be no net

fill allowed in the 100-year floodplain to provide protection for the natural flood abatement provided by the floodplain. Development should be prohibited within the 100-year floodplain. In some areas, use of the 100-year floodplain for designating the width of the riparian management area may be practical or useful for conservation incentives.

Note of a dissenting opinion: Not all participants agreed that development should be prohibited within the 100-year floodplain. It was mentioned that development in the 100-year floodplain can be done safely, and/or allowed on a case-by-case basis.

8) Incentives should be offered for existing landowners interested in planting or restoring riparian areas (i.e. establishing a riparian area where one did not previously exist or converting a grassed riparian area to forest).

#18 Riparian Maintenance: The riparian stream (area) should be preserved or restored with native vegetation that can be maintained throughout the plan review, delineation, construction, and occupancy stages of development..

Recommendations:

1) Stormwater Best Management Practices (BMPs) are encouraged along with forested riparian areas, to aid in treating runoff.
2) Permitted and prohibited activities within the riparian area should be defined.
   Examples of permitted activities:
   a. passive recreation (hiking/non-impervious footpaths, fishing, picnicking) – this will allow for a nice fit with the 'greenways system'
   b. removal of damaged/diseased trees and non-native invasive species
   c. utility right-of-ways
   d. limited fertilizer/pesticide/herbicide applications

   Examples of prohibited activities:
   a. soil or vegetation disturbing activities (including clearing/grading), expect as noted above; exceptions can be made upon review and special permit
   b. impervious surfaces
3) Encourage the installation of utilities outside of riparian areas. If installed within or crossing a stream, encourage direction drilling of utilities, which involves drilling under the streambed instead of trenching across the stream.

4) All development plans should clearly represent riparian areas and specify plans for clearing/grading and avoiding impacts to the riparian area(s). Riparian areas should be clearly designated on-site and county/municipal staff should ensure compliance by occasional site visits.

5) Minimize stream crossings, but where they occur should be at 90° to bank. Bridges are preferable to culverts, and culverts should allow for fish passage and provide least impact to stream hydrology. All crossings should be engineered to manage the flow of flood waters to prevent damming effects during high flow events.

6) Riparian area education should be implemented such as kiosks in public parks, brochures, newspaper articles, etc. regarding importance/purpose of healthy riparian areas. Education should include why streambanks should not be mown, and the benefits of encouraging native vegetation.

#19 Clearing and Grading: 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. A fixed portion of any community open space should be managed as a protected green space in a consolidated manner. &
#20 Tree Conservation: 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.

Recommendations:

1) Clearing of construction roads should coincide with planned permanent roadways whenever possible.

2) Plan grading for the complete site and not just for each building footprint

3) Modify Haywood County slope ordinance to include limits on clear cutting and destruction of native plant and specimen trees. Allow waivers for clear cutting in special circumstances, such as exotic species removal.

4) Modify Haywood County ordinances for new subdivisions and properties to protect from destructive clearing and development practices and non essential removal of specimen trees, especially in and near riparian areas, with strong consideration of potential risk of wildfires.

5) Create ordinances through Haywood County Health Dept.'s Environmental Health division to limit the clearing of native plants and trees on septic field and allow no disturbance of repair area until needed.

6) Remove trees if proper grading requires it, but replace trees based on location and objectives. Develop a ratio for replacement.

7) Clarify and modify existing clearing, grading and land use ordinances governing protection of riparian areas and floodplains to minimize cumulative impacts of sediment to water resources, retain the natural hydrology of the development site, and maintain shade in riparian areas.

8) Haywood County, Clyde, Canton and Maggie Valley should consider adopting similar or modified ~~appearance~~ tree preservation codes as that used by the Town of Waynesville.

9) Educate the public about the economic benefits of planting trees, minimizing clearing, proper grading and conservation easements.

10) Develop a woodland preservation ordinance. Include objectives, such as to maintain aesthetics, provide shade for cooling lots and runoff temperature. Develop and include a list of specimen trees and minimum sizes for retaining. (Resources include Better Site Design handbook case study on page 149; Arbor Day Foundation at www.arborday.org)

11) Educate about and provide incentives for developers to assess sites and natural resources using the Resource Assessment Mountainside Development techniques demonstrated by Haywood Community College, Haywood Waterways Association, and Haywood Soil and Water Conservation District.

#21 Land Conservation Incentives: Incentives and flexibility in the form of density compensation, buffer averaging, property tax reduction, storm water credits, and by-right open space development should be encouraged to promote conservation of stream buffers, forests, meadows, and other areas of environmental value. In addition, offsite mitigation consistent with locally adopted watershed plans should be encouraged.

Recommendations:

1) Continue Haywood County's participation in the state's Present Use Tax Valuation System, which provides a reduction of property taxes if the land is actively used for agriculture, forestry, or horticulture. This encourages landowners to keep the land in a semi-natural state. Recommend to the NC General Assembly to amend state laws to let conservation lands qualify for this program and reduce the minimum required acreage (see Senate Bills 1203, 569, and 1305, among others).

2) The County's four municipal areas should implement Voluntary Agricultural District (VAD) programs for land falling under their jurisdictions. Haywood County already has an active VAD (including an Enhanced VAD ordinance, approved in March 2007). VADs encourage landowners to restrict development on their land in return for various tax breaks and other incentives.

3) Increase efforts to educate eligible landowners about existing land conservation incentives, similar to the work now being done by the Bethel Rural Community Organization. Existing incentives aren't always well-known or well-understood

4) Town, county, state, and federal officials should find ways to provide additional funding to support outright purchase or conservation easements on lands with conservation and/or open space values. Funding for conservation easements remains inadequate to address the need or the demand. Possible funding mechanisms include line-item appropriations, ~~real estate transfer taxes~~ sales taxes, and bonds.

5) The County should fund a County Farmland Protection Plan. Estimated cost is $5,000 or less (for staffing, community meetings, and copies of the resulting plan). The result would include a comprehensive and pro-active plan for protecting these undeveloped lands. A state-approved plan would qualify the county for an increased cost-share percentage for NC Farmland Preservation Trust Fund grants (i.e., only 15% cost-share required for counties with an approved Farmland Protection Plan; 30% without). For a $100,000 project, that results in a $15,000 increase in state funding. A small investment in a Farmland Protection Plan will result in forward thinking about protecting our county's rural areas, and additional state funding to implement farmland protection objectives. (Alamance County is one of first to develop a plan)

6) Amend county and municipal ordinances to encourage more compact developments (smaller "footprints"), especially to keep developed areas away from riparian corridors, floodplains, and steep slopes. The Lot Design Subgroup may have specific recommendations on such incentives (esp. regarding Principal No. 11 – Open Space Design).

7) Provide density bonuses as an incentive for conserving more open space than required.

#22 Storm Water Outfalls: New storm water outfalls should not discharge unmanaged storm water into jurisdictional wetlands, sole-source aquifers, or other water bodies.

Recommendations are most applicable to non- Phase II communities:

1) New stormwater outfalls should not discharge directly to streams, rivers, lakes, natural wetlands, sole-source aquifers, or other sensitive areas (i.e., trout waters, recreational areas).

2) Require all new development activities (and re-developments) to submit a stormwater management plan to the appropriate county and/or municipal official. The plan must contain a description of an adequate, temporary stormwater retention system to prevent construction site stormwater runoff. The temporary structure should satisfy the requirements of the permitting agency. The stormwater management plan should also include post-construction stormwater controls that satisfy the requirements of the permitting agency before a permit is issued. The plan should include a maintenance schedule and the responsible party for maintaining the practice.

3) Stormwater from new stormwater outfalls should be treated with appropriate structural and/or nonstructural BMPs.

a. Structural BMPs refer to physical structures designed to remove pollutants from stormwater runoff, reduce downstream erosion, provide flood control, and promote groundwater recharge. Structural BMPs require engineered design and construction.

b. Nonstructural (also referred to as preventative) BMPs are typically passive or programmatic. Nonstructural BMPs help prevent the generation of stormwater runoff and the contamination of runoff by pollutants. This often involves community participation, involvement, and outreach.

c. Stormwater BMPs should follow guidance provided by the NCDENR Division of Water Quality.

d. Temporary BMPs should be monitored after storm events, and post-construction BMPs ~~should be~~ monitored ~~on a monthly basis~~ annually to ensure the BMP is functioning properly.

4) Stormwater BMPs should conform to and, when possible, amplify natural features of the landscape. Filter strips, grassed swales, and restored riparian management areas can achieve this goal. Other natural looking BMPs such as bioretention and stormwater wetlands can be blended into natural areas of site designs, or create new, small-sized natural areas within normally barren portions of the site, such as parking lots, walking areas, and outdoor plazas.

5) Existing land use and topography (i.e., steep slope, low relief) should be taken into account during the planning process. Physiographic factors can limit use of many structural controls, and soils should be tested for infiltration feasibility. Those projects that can demonstrate that post-construction stormwater controls match that of pre-construction hydrology should receive stormwater credits and a reduction in stormwater fees if fees are adopted.

6) New development activities that include new stormwater outfalls should be defined as either low-density or high-density projects.

    a. Low-density projects can be defined as those permitted projects containing no more than two dwelling units per acre and the total built-upon area (impervious surface cover) is no more than 12 percent. Stormwater should be controlled through vegetated conveyances where practicable, and all structures should be at least 30 feet from perennial and intermittent streams, and not within riparian areas. Deed restrictions and protective covenants are required by the locally issued permit and incorporated by the development to ensure that subsequent development activities maintain the development (or redevelopment) consistent with the approved plans.

    b. High-density projects are those projects not defined by the low-density option. Structural stormwater BMPs must be installed to control stormwater flow, total suspended solids (TSS), and nutrients. Where temperature is a concern (i.e., new stormwater outfall to trout waters, recreational areas, and/or other sensitive areas), appropriate temperature controlling BMPs should be installed. BMPs that have been proven effective in reducing temperature include stormwater wetlands (extended detention, pocket, and pond/wetlands) and wet detention basins. All built-upon areas should be at least 30 feet landward of perennial and intermittent surface waters, and not within riparian areas, and deed restrictions and protective covenants should be required by the locally issued permit and incorporated by the development to ensure that subsequent development activities maintain the development (or redevelopment) consist with the approved plans.

7) An effective stormwater management program requires sufficient staff and resources to inspect and enforce applicable ordinances and specifications. Implementing a stormwater fee and/or an increase in water use fees is an option.

8) No new development or construction activities should be allowed in the regulated floodplain if the project increases the flood stage or velocity of the water's flow or presents a threat to public health, safety, and welfare. Hazardous materials should not be stored in the floodplain (See Recommendation for Principle 17 (7).

Implementation Issues: Recommendations outside of the Center for Watershed Protection's Principles

Recommendations:

1) Encourage programs to educate developers and home buyers on LID principles

2) Refer to NC Division of Water Quality's Best Management Practice Manual for all BMPs.
3) Establish guidelines for an approval process for ensuring that LID principles are considered throughout site design. (example could be a checklist)
4) Create a certification program for sustainable developments, or for developers who undergo specific training. (The Lower Cape Fear Stewardship Development Awards Program is an example of a related concept. This partnership between New Hanover, Pender, and Brunswick Counties and others publicly acknowledges sustainable projects. See www.stewardshipdev.com)