



Chapter 5

Transportation, Tourism, and Marketing Issues

The management of any roadway corridor, be it a scenic byway or not, hinges on issues of safety, access, mobility, efficiency and maintenance. The key question for scenic roads is how to maintain the unique characteristics of the roadway network (those characteristics that led to its nomination and eventual inclusion on the states' list of scenic and historic highways) while recognizing the need for addressing transportation issues consistent with a changing and evolving landscape.

The road network in northern Delaware has seen significant changes in recent years, and both DelDOT and WILMAPCO (Wilmington Metropolitan Planning Council) have been at the forefront of planning, designing, and financing safety and transportation improvements. Plans such as this attempt to provide guidance both to these agencies and the numerous others whose actions and activities impact scenic byways. This chapter is intended to outline the current transportation efforts underway in the Red Clay Valley Scenic Byway. Future transportation efforts within the Byway will include interaction with the

Byway Steering Committee (soon to be Management Committee) and the Context Sensitive Design components of this plan. It should be noted that current and future transportation projects in Delaware will be implemented in accordance with the Governor's Livable Delaware initiative, which directs transportation funding for improvements to growth zones identified through state planning efforts.

Also included in this chapter is a discussion of the limits to which tourism and marketing are a component of overall management strategies for the Byway. As stated throughout this plan, the preservation and wise stewardship of the Byway's roadways and intrinsic qualities is of highest priority. To that end, the inclusion of the Red Clay Valley Scenic Byway on the state's list of scenic and historic highways is seen not as a strategy for promoting increased use of the Byway, but rather as a tool for undertaking watershed-wide planning for resource protection and enhancement. As such, the tourism and marketing components of this plan are intended to elucidate the conservation and preservation objectives of this plan, describe education and outreach mechanisms intended to build a sense of stewardship in the Valley, and discuss appropriate signage for the Byway.

A. TRANSPORTATION AND SAFETY

1. Liveable Delaware Initiative

Governor Ruth Ann Minner signed Executive Order 14 introducing the Liveable Delaware Initiative on March 28, 2001. Built on the state's 1999 "Shaping Delaware's Future: Strategies for State Policies and Spending," the Liveable Delaware initiative is the state's blue print for fighting sprawl. As the Governor stated, liveable Delaware is a "comprehensive strategy to get sprawl under control and direct intelligent growth to areas where the state, county and local governments are most prepared for new development in terms of infrastructure, services and thoughtful planning."

As outlined in the Liveable Delaware initiative, each state agency and department was required to complete an implementation plan to address eleven key Liveable Delaware goals. For its effort, DelDOT identified thirty-one activities that directly supported one or more of the Liveable Delaware goals. Those most germane to this effort include the State Scenic and Historic Highways Program (of which this effort is a part), and DelDOT's policies and programs involving Context Sensitive Design, Traffic Calming, Tree Preservation, Bicycles, Pedestrians and Road Design Manual Update. Given the intent of this management plan, it is clear that the state's and DelDOT's activities go far towards helping to realize the Red Clay Valley Scenic Byway goals.

While each of these policies and programs is of value in the Red Clay Valley, DelDOT's Context Sensitive Design Policy (D-07) (including creation of its Context Sensitive Design Manual) has the greatest potential for influencing roadway design in Delaware. The essential purpose of this policy is to better plan and design transportation projects for compatibility with the communities they are intended to serve. As a result of this policy, all new transportation project planning and design efforts are required to take a context sensitive design approach. Included in this policy is the setting aside of five percent of project construction costs for improvements to the community or environment immediately adjacent to the project. Such a set-aside is intended to address quality-of-life issues potentially impacted by transportation projects.

2. Transportation Projects

The following projects within the Red Clay Valley Scenic Byway are included on a list compiled and maintained by DelDOT for projects within state-approved scenic byways. Each project is identified by a project number, a brief description of the project, and efforts used to minimize impact to the Byway through the principles of context sensitive design (7).

Project ID 04-00151

N274, Brackenville Road, SR 41, Lancaster Pike to N258, Barley Mill Road

This project includes roadway reconstruction, drainage improvements, slope stabilization, and stream relocations along Brackenville Road and drainage improvements along Barley Mill Road, just north of Brackenville Road.

Efforts used to minimize impact and address the principles of context sensitive design include numerous meetings and field visits with the Byway Steering Committee to assess alternative approaches and context sensitive design solutions, including refinements to the grading plan and planting plan (emphasizing additional/replacement vegetative planting consistent with native flora), modifications to the drainage plan to encourage sheet flow and reduce channelization of road runoff, alternative curbing treatments including the use of dyed curbing consistent with local interests, and modified guardrail consistent with the Valley's rural setting. DelDOT continues to inform and consult the Steering Committee on decisions affecting the Byway.

Project ID 05-01137

BR 1-137 on N263A, Foxhill Lane over Red Clay Creek and Rolling Mill Road

BR 1-137 (Wooddale Covered Bridge) was one of the last historic covered bridges located on a state-maintained road. The bridge was destroyed during a flood in September 2003. The covered bridge will be reconstructed. The approach alignment will be raised to accommodate higher flooding and a retaining wall will be constructed along Rolling Mill Road to retain the increased roadway profile and alleviate the existing slope stability concerns. Scour mitigation measures will be incorporated into the design. The reconstruction contract has been

awarded and construction is anticipated to begin in September 2007; work is expected to be completed in approximately one year.

Efforts used to minimize impact and address the principles of context sensitive design include replacing the covered bridge with a historic reproduction, minimizing impedance of flood waters and reducing flooding impacts to the road and bridge, and providing in-stream protection measures to reduce stream scouring.

Project ID 05-00402

Culvert replacements on N239 Pyles Ford Road

The culvert on the south end of Pyles Ford road will be replaced with a precast concrete culvert and wingwalls. The remains of the triangular stone culvert on the north end of the road will be replaced with a precast concrete culvert and wingwalls. Riprap will be placed at both structures to prevent scour.

As a planned project, little is currently known of the efforts to minimize impact and use context sensitive design principles. Clearly, the remains of the stone culvert need to be replaced and the use of riprap is an acceptable practice for stabilizing stream banks. Further discussion with DelDOT is warranted to assess impacts.

Project ID 07-10006

Pavement & Rehabilitation, North – VI, 2007

This project involves the rotomilling, hot-mix patching, and hot-mix overlay on Carpenter Road, Montchanin Road, Rock Spring Road, Hillside Road, Greenbank Road, and Kennett Pike.

These projects, some of which occur in the Red Clay Valley Scenic Byway, encompass milling, repair and replacement of existing paved surfaces. Impacts to the Byway are not anticipated.

Project ID 25-071-05

BR 1-100 on N243, Old Kennett Pike, West of Centreville

This project will replace concrete slab on stone abutments with precast concrete rigid frame or box culvert, widen and reconstruct approaches and guardrail, and add riprap for scour protection. Br. 1-100 is a concrete slab on stone abutments. Repairs were required to temporarily stabilize the headwall which had previ-

ously rotated. The bridge is structurally deficient.

The structural issues related to this project are a matter of safety and should proceed as scheduled. As of now, little is known of the context sensitive design efforts to be used, although the approach widenings, guardrail, and riprap should be discussed with DelDOT.

Project ID 25-074-05

BR 1 -099 on N243, Old Kennett Pike

The existing structure consists of a prestressed concrete box girder structure with concrete decking, supported by two concrete abutments. Recent scour calculations raised concerns about the abutments/wingwalls “scouring out” and causing the potential for bridge failure. Rip rap is not large enough to provide adequate scour protection, so precast articulated concrete block will be placed from abutment to abutment and along the wingwalls. The cabled concrete will be recessed one foot below the streambed elevation and backfilled using natural streambed materials, creating a low-flow channel.

The land on the south side of the bridge is owned by the Delaware Nature Society and is part of the Burrows Run Preserve, located within the Red Clay Valley Natural Area. A conservation easement, held by the Delaware Department of Natural Resources and Environmental Control (DNREC), was placed on the property in 1995 in accordance with the Nature Preserve designation.

DelDOT, DNS, and DNREC signed a temporary easement agreement for this project in January 2007. The agreement outlines the rights and points of access and requirements for stabilization in accordance with recommendations from DNS and DNREC.

During construction DelDOT will be removing all four sections of guardrail around the bridge. The current guardrail is steel beam. DNS requested the guardrail be replaced with materials (such as steel reinforced wood) more in keeping with the principles of context sensitive design for this Byway.

Project ID 25-074-01

BR 1-118 on N 258 Barley Mill Road over Red Clay Creek, Ashland

This bridge was selected for special funding

under the Historic Covered Bridge Preservation Program to maintain historic integrity and structural capacity. Bridge 1-118 is currently ranked 55th out of 1,399 in the Department's bridge deficiency list (via bridge management program).

Br. 1-118 is one of the last historic covered bridges located on a state-maintained road. Under the federal Historic Covered Bridge Preservation Program, this bridge will be rehabilitated. The work included in the project scope includes replacement of roof shingles, timber decking, and timber siding; cleaning and painting of the interior and exterior siding; painting of the steel support girders; placement of scour protection; and mill and overlay of the approaches with new hot-mix pavement.

It is clear from the selection of this bridge for special funding that DelDOT intends to utilize the principles of context sensitive design for this project. Undoubtedly, DNS will continue to monitor this project.

Centerville and Lancaster Pike Intersection Improvements

This is a privately funded project and does not have a Project ID number.

The proposed improvements will include some widening at the subject intersection to accommodate additional traffic that will be generated by the Little Falls Village. The project will also include adding crosswalks, sidewalks and medians to improve pedestrian movement.

Impacts to the intrinsic qualities of the Byway from this project are expected to be minimal. The extent to which this project utilizes the principles of context sensitive design is currently unknown. However, privately funded projects such as this raise several questions: (1) how will DelDOT (and presumably the New Castle County Department of Land Use) monitor and approve such projects along Scenic and Historic Highways?, and (2) what role will the Corridor Management Plan play when private entities propose transportation projects along Scenic and Historic Highways? This effort encourages continued dialogue on these issues so as to not compromise the Red Clay Valley Scenic Byway Corridor Management Plan.

3. Traffic Issues, Bicyclists and Pedestrians

DelDOT's guidelines for corridor management plans require the preparation of a "narrative describing strategies to accommodate traffic while maintaining a safe and efficient level of highway service and ensuring the safety of sightseers in small vehicles, as well as bicyclists, joggers and pedestrians."

Where increased tourism is anticipated, an evaluation of accident data can assist in determining where potential trouble spots will occur. This effort, however, focuses on preservation rather than tourism development (and the increased traffic corresponding thereto). As such, it is not the intent of this plan to examine accident analyses but rather the transportation issues associated with the Byway's roadways.

The roads of the Red Clay Valley are generally narrow, often lack shoulders and other "improvements" typical of modern roads, and negotiate the countryside along curves and steep slopes. However, it is these very conditions that contribute to the character of the Byway's roads and are an integral part of their intrinsic value. From the standpoint of traffic safety, it is these very elements that are often pointed to as effective traffic calming measures in other settings.

With regards to bicyclists, joggers, and pedestrians, this plan recognizes the narrow width of most Byway roadways and does not encourage changes thereto to accommodate pedestrian or bicycle traffic. Again, the intent here is to maintain the existing roadways in a manner that maximizes protection of the Valley's intrinsic qualities – the historic narrow road widths, sharp curves and nearby roadway features (rock outcrops, woodlands, specimen trees, etc.) are characteristic of the Valley and their preservation is seen as important not only for resource protection but for their ability to calm traffic.

While opportunities may be limited to accommodate bicyclists and pedestrians, this plan encourages coordination among DelDOT, Delaware Greenways, the Delaware Bicycle Council and others to coordinate safety and public access issues within the Byway. Public opportunities for pedestrian access are constrained by private land ownership but are certainly encouraged at several institutions with established trail systems (including Delaware Nature Society's Ashland Nature Center and Valley Garden Park).

Opportunities for biking may be somewhat limited given the characteristics of the Byway's roads, yet bicycle usage is acceptable on those roads designated by DelDOT as having average or above average cycling conditions (8)(9).

Average roads include portions of: Centerville Road, Hillside Road, Pyles Ford Road, Owls Nest Road, Way Road, Creek Road, Old Wilmington Road, Auburn Mill Road, Old Public/Benge Road, Nine Gates Road, Center Mill Road and Burnt Mill Road.

Above average roads include portions of: Benge Road, Mt. Cuba Road, Hillside Mill Road, Centerville Road and Rolling Mill Road.

Although this plan does not envision or encourage expanded tourism or recreational activities, opportunities nevertheless exist currently to experience the many wonders the Byway has to offer.

4. Transportation Management Issues

The unique roadways of the Red Clay Valley Scenic Byway traverse hills and streams, wrap around sharp curves and present many eye-catching splendors for tourists and residents alike; they also serve as thoroughfares to those commuting to Wilmington or Pennsylvania. As with many roads, these competing interests, coupled with increased volumes of traffic in recent years, contribute to accidents and traffic-related problems. In recent years, increased traffic and safety concerns have led DelDOT and WILMAPCO to undertake several transportation studies and road improvement projects within the Byway. Several of these studies and subsequent improvements have involved extensive community outreach and consensus building in an attempt to consider the intrinsic qualities of the Byway. Others have not. Reasons for this are many, including: changing paradigms in transportation planning, different staff working on different portions of the Byway at different times, and the need for quick responses to safety concerns. The transportation management issues associated with the Byway have never before been part of a coordinated approach such as this; in fact, part of the rationale for this scenic road designation was the desire to better coordinate traffic and safety improvements.

Traffic Counts

Appendix 8 contains traffic counts (average annual daily traffic) undertaken by WILMAPCO for the years 1999 through 2005. While shifts have certainly occurred, some roads have actually seen decreases in traffic between 1999 and 2005; others, as expected, have seen increases in traffic. It is unlikely that a trend analysis would yield much helpful information given the relatively small dataset available. Nonetheless, traffic counts should be monitored in the years to come in order to attempt to anticipate Byway needs and transportation management issues.

Road Widths

Likewise, DelDOT compiled a list and map depicting road widths throughout the Byway (also contained in Appendix 8). As different segments of the same Byway road can have different widths, this information should be consulted routinely when road work or improvements are anticipated within the Byway.

Access Management

Access management issues present a unique set of issues along any roadway, but especially along scenic byways. In addition to issues involving safety and sight distance, among others, groups working within scenic byways struggle to reduce the potential visual impact of driveways and new streets. New development will certainly continue within the Byway – the objective is to reduce the impact of such development on the Byway's intrinsic qualities.

Several techniques exist to reduce the impact of the curb cuts associated with new development, among them:

- improve landscaping criteria for access roads;
- limit the size and amount of signage permitted for new access streets;
- carefully assess the design speed along the byway in order to reduce the width and length of access lanes (acceleration and deceleration lanes);
- use attractive alternative pavers to differentiate access lanes from travel lanes;
- use landscape islands to create a boulevard at entrances and reduce overall imperviousness;
- use alternative curbing (such as granite or dyed curbing); and
- eliminate access lanes on rural roads with limited traffic.

Many of the techniques listed above draw from the principles of Context Sensitive Design. Both DelDOT and a subcommittee of this plan's Steering Committee have been working to prepare Context Sensitive Design guidelines for the state and the Red Clay Valley, respectively. Such guidelines will be valuable tools for better design along scenic and historic highways.

In addition, this plan recommends collaboration with New Castle County to improve protection for scenic byways, including the possibility of incorporating corridor overlay standards into the Unified Development Code.

5. Coordination with DELDOT

Many people utilize the roads of the Red Clay Valley and it is important to balance their interests so that safe transportation is available in a manner that respects the intrinsic qualities of the Byway. To date, DNS, as the sponsoring organization for this effort, has taken the lead in communicating the interests of the Steering Committee/Management Entity and stakeholders to DelDOT when knowledge of transportation improvements becomes available. For example, recent design improvements unveiled for Brackenville Road and Barley Mill Road led to meetings with DelDOT, site walks with DelDOT staff and consultants, and suggested revisions to landscape improvements and road design using context sensitive techniques. In addition, DNS, through the auspices of the Steering Committee, initiated a dialogue with the Secretary of DelDOT to institutionalize a process for communicating with sponsoring organizations and the public about construction and major maintenance plans that impact Scenic Byways. These discussions have also touched on the desire to create procedural guidelines for engineers and design staff who will work on projects that impact Scenic Byways.

One of the objectives of this study is to establish a cooperative approach for implementing future transportation projects that involves stakeholders; the intent is to receive public comment on proposed transportation projects, preserve and enhance the Byway's intrinsic qualities (while ensuring safety and mobility), retain the scenic character of the roadways by maintaining current road width and alignment, and minimize the use of curbing and guardrails. Towards this end, DNS is working with DelDOT to implement a

Memorandum of Understanding (MOU) to formalize an approach that involves DNS in the design and construction of any road improvements or major maintenance activities within the Byway. One of the objectives is to capitalize on DelDOT's context-sensitive design policy, the intended purpose of which is to plan and design transportation improvement projects that fit into the communities they are intended to serve, and make DelDOT and other stakeholders aware of the useful knowledge contained in this plan.

Appendix 9 contains draft language for the first MOU between DelDOT and DNS. It is anticipated that a revised version of this document will be executed upon approval by DelDOT of the Corridor Management Plan. In the first several years it is the intent of the two parties to execute the agreement yearly in order to more clearly assess the roles of the two organizations. Once these roles are established, it is likely the agreement will not need to be executed on a yearly basis.

6. Context Sensitive Design

For its part, DelDOT has been working to prepare context sensitive design guidelines for each identified scenic road "that will address design issues related to preservation and enhancement of their unique characteristics without compromising safety." (December 12, 2005 correspondence from DelDOT Secretary Nathan Hayward). The state's intended manual will likely provide a generic description of context sensitive design techniques within the context of the State of Delaware and the byways currently designated.

In addition to the state manual, this planning effort has resulted in a Context Sensitive Design Appendix intended to aid DelDOT in its future efforts. It should be noted that the intent of Appendix 5, Context Sensitive Design for the Red Clay Valley Scenic Byway, is to complement and build upon the state's efforts to develop a state-wide Context Sensitive Design Manual. As such, Appendix 5 contains a palette of design materials germane to the Red Clay Valley, including:

Photographs and descriptions of guardrails, signage, sensitive road improvements, etc. that can help create a unified vision; Landscape management tools (including lists of plants indigenous to this region, a description of maintenance and enhancement issues, etc.); and

Descriptions of “demonstration” projects within the Byway that attest to the value of public communication and outreach.

It is anticipated that both efforts will complement each other and contribute to more thoughtful design in the Red Clay Valley.

B. TOURISM AND MARKETING

The vision of this planning effort is to better understand and appreciate the scenic, natural and historic qualities of the Red Clay Valley and ensure their preservation and conservation. As such, it is inconsistent to consider conventional marketing aimed at expanding tourism opportunities within the Byway. Having said this, however, it is not the goal of this planning effort to exclude those with an appreciation of the Byway but rather to provide interpretation and education that properly conveys the importance of preservation, the rich and distinctive history of the region, the scenic splendors that grace the Valley, and the natural resources that demonstrate ecological processes and contribute to the overall character and visual amenities of the Byway.

The following sections document the various kinds of outreach appropriate for the Red Clay Valley Scenic Byway.

1. Conservation and Preservation Issues

The Red Clay Valley has a rich tradition of conservation and preservation - from private land stewardship initiatives to resource protection inventories and studies to habitat and stream watch programs, efforts have been broad-based and comprehensive. From a historical perspective, conservation extended beyond the set-aside of land to include working partnerships that have influenced landowner stewardship and land management. Regardless of the modern influences that have shaped other communities, the Red Clay Valley’s resources have largely been spared. It is due to this “intact” landscape that preservation is viewed so highly.

Chapter 4 describes in detail the intrinsic qualities that contribute immeasurably to the Red Clay Valley Scenic Byway. Chapter 6 describes the preservation and management strategies by which this plan is to be implemented. Together, they focus this plan’s efforts to understand, interpret, and enhance the intrinsic qualities of the

Byway and ensure their long term preservation. Among the objectives for preservation are the creation of a byway-specific preservation easement program, initiation of a Byway stewardship recognition program, coordination with utility providers to better manage vegetation along the Byway, and government recognition of the Byway through comprehensive plans and development regulations.

2. Education and Outreach

In order to fully understand the importance of conservation and preservation within the Valley, it will be critical to provide interpretation and education materials that properly convey the rich and distinctive history of the region, its scenic splendors and the natural resources that demonstrate ecological processes and contribute to the overall character and visual environment of the Byway.

Much work has been done to inventory and interpret the resources of the Valley and documentation of much of this is offered herein. The sponsors and partners who together guided the creation of this plan possess innumerable resources that together contribute strongly to the regional identity of the Byway. Clearly, these organizations share a common heritage rooted in the region’s rich history. What this plan hopes to do is provide an impetus for a coordinated story that can be told of the broader landscape with a focus on the need to preserve and protect the Byway’s unique intrinsic qualities. This need not be a daunting task, but rather a coordinated effort to provide education and interpretation that recognizes the efforts of those in the Valley and makes such information available to the broader public.

With this in mind, Chapter 6 envisions the following:

- creation of interpretive mapping and coordinated descriptions of the scenic, natural and historic intrinsic qualities of the Byway as part of an educational display and/or lecture program at the Delaware Nature Society or at any other partnering organization;
- the development of Byway-focused curriculum materials for use by DNS, other organizations, and local schools;
- the formation of coordinated education programs among the primary area institutions utilizing shared resources and shared staff expertise;

- the design and production of a brochure that provides an overview of the Byway and the region's vast resources; and
- the establishment of a multi-media internet website to share information about the Byway and offer links to other websites that provide useful information on scenic byways.

Together, these efforts will help visitors interpret and appreciate the wealth of resources this Valley has to offer.

3. Signage

Signage can be helpful in ways that convey needed information or be so excessive as to detract from the visual landscape and contribute to scenic blight. Of paramount importance to this planning effort is the desire to "consolidate the number and guide the placement of signs along the Byway consistent with the vision, mission and goals of the Byway" (Objective 5-2).

To this end, the plan envisions inventorying existing roadside signs pursuant to the Manual on Uniform Traffic Control Devices (MUTCD). This will better gauge the number of signs and the potential for consolidating, eliminating, and replacing signs. Several discussions by the project Steering Committee helped develop a consensus about appropriate signage for the Byway. Conclusions include the following:

- remove unnecessary signs and paint the backs of remaining signs a dark color to reduce visual contrast;
- consider signage intended to reduce truck traffic (including "local traffic only" signs and tonnage limit signs);
- encourage the continued use of complementary direction and distance-oriented signage as a way to reduce off-premises signs;
- limit the number, placement and size of scenic byway identification signs (place signs on identified Byway roads upon entering the watershed only); and
- consider the elimination of "Welcome To" signs typically announcing subdivisions in the Byway.

Consideration should also be given to reexamining the signage provisions contained in New Castle County's Unified Development Code in order to assess the feasibility of revisions to sign standards (such as size, materials, types of illumi-

nation, etc.).

Outdoor Advertising

Outdoor advertising, in the form of signs or billboards, often detracts from the scenic landscape. At present, little signage of this type exists in the Byway and those that do exist are governed by New Castle County's Unified Development Code, Article 6. As with many codes of this type, the County regulates the number, placement, size, and spacing of such signs.

Along state highways such as Route 82, a permit is required from DelDOT for the erection of any billboard visible from the road. Such permits are required to be renewed annually. Delaware's rules controlling outdoor advertising are found in Title 17 Highways, Sections 1101 to 1131 and govern size, spacing, and lighting, among other things. Delaware also has Outdoor Advertising Rules and Regulations found in Section 1.13.

The federal law governing requirements for state receipt of federal highway funds prohibits the erection of new billboards along applicable roadways that are designated as scenic byways. The State of Delaware adheres to this requirement and DelDOT will not issue permits for new billboards along routes that have been designated as part of the state Scenic and Historic Highways Program. This includes the 28 secondary roads in New Castle County that comprise the Red Clay Valley Scenic Byway. It should be noted that existing signage or billboards are grandfathered; furthermore, the state does not require the removal of existing outdoor advertising nor does it control signs on the premises of individual businesses.