AC 2010-2228: GREEN TOURISM PROJECT AS PART OF SMART URBAN GROWTH CLASS

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Abstract:
The Strategies for Smart Urban Growth and Redevelopment class under took a class project for the fall 2009 semester to assist the Arlington County Convention and Visitors service in developing a green tourism program for Arlington. The project was guided by the instructor and involved a collaborative partnership with the county. A number of information exchange meetings were held during the semester including an In-progress-Review the end of October and Final Recommendations Briefing at the end of November as well as a special meeting with the Director of the County's Department of Economic Development. This project was closely aligned with the course class material but did require extensive literature review and analysis of the green tourism experience in other parts of the county. The class was divided into three teams for the first part of the project to develop strategies for; 1) transportation, 2) hotels and restaurants and 3) special destinations. The teams than came together in the development and presentation of the final recommendations to the county. The county was very pleased with the effort and the students felt they got more value out of the course with are real world project which represented 30% of their grade. The paper describes the process used in the project, an assessment of its effectiveness and the specific recommendation outcomes.

Key Words: Smart growth, urban redevelopment, green tourism, class project

Scope and Description of Course:

This course addresses polices, concepts, practices, and tools for smart growth sustainable urban planning and provides an understanding for how to apply these to urban communities. The sustainable urban development is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations to come. In other words, it is the development and restoration of urban areas that will meet the needs of the present without compromising the ability of future generations to meet their own needs. The course addresses a number of urban design concepts for smart growth and sustainable development including balanced land use planning principals; importance of an overall transportation strategy; providing urban tree coverage, leveraging public transportation accessibility; providing a spectrum of housing availability; integration of office, retail and housing units; reduction of urban area environmental foot print; use of recycled, reused, reusable, green and sustainable products; integration of renewable solar energy and wind power into buildings and government systems; transit oriented development; innovative low impact storm water management practices; reduction in urban heat island effects; urban water resource management; and energy efficiency and conservation. Specific examples on sustainable practices and policies reviewed and assessed in the class include:

- Balanced land use planning principals
- Importance of an overall transportation strategy
- Leveraging public transportation accessibility
- Broad spectrum housing availability
- Integration of office, retail and housing units

- Reduction of urban area environmental foot print
- Use of recycled, reused, reusable, green and sustainable products
- Integration of solar and wind power into buildings and government systems
- Transit oriented development
- Urban water resource management

The course goal is to introduce the concepts, practices, and tools for smart growth sustainable urban planning and develop an understanding for how to apply these to urban communities. The course objectives are to; 1) Understand the importance of sustainable urban growth and revitalization in today's global situation, 2) Acquire an understanding of the principals of sustainable urban planning, 3) Learn about the various tools and practices that are available to assist in the planning and development process for achieving sustainable urban communities and 4) Gain an understanding through case studies of the successes and failures of different cities in achieving sustainable urban development and revitalization.

Development of the Green Tourism Project

The course instructor contacted the Director of Economic Development for Arlington County to explore opportunities for a class project in the area of urban sustainable development. Immediately a new initiative just getting started in sustainable, green, urban tourism was suggested. It was an area the county was seeking ideas and suggestions for a new green tourism initiate that the Arlington County Convention and Visitors Service (ACVS) was investigating Thus it was a very timely subject for a class project. Because this was a new area of investigation for the county the class project was an important input to the development of the county's green tourism program and the public policies associated with it. Tourism is a major economic segment of Arlington County's business community and contributes significantly to the county's tax base. Sustainable development changes in this sector would contribute to the county's policy goal of reducing emissions in Arlington and generating a smaller environmental footprint.

The instructor had a follow up meeting with the Director and CVS staff to discuss a plan for class participation and clarify the county's expectation and goals for the project. The Arlington County Convention and Visitors Service's overall goal was to develop and promote an environmentally sustainable urban tourism or green tourism program in Arlington County. The class project goal was the following:

> To review green initiatives in Arlington County, Virginia, and the tourism industry globally in order to develop recommendations for an environmentally sustainable urban tourism or green tourism program in Arlington County.

There was continuing contact throughout the semester with county officials. Staff from the ACVS visited the class in mid September (2009) to share information. The class visited the county office and presented an in-progress-review in late October to the Director and ACVS staff. In late November the final report on the project with specific recommendations was presented to the Director and ACVS staff.

After initial review of selected background material the students elected to integrate existing

public and private information on sustainable and green tourism for the Arlington Project into three broad areas:

- Buildings and accommodations
- Transportation
- Visitor Services and Events

Collection of information, data analysis and the report format for the study were organized around these three topic areas. The class was divided into three teams to separately research each of these three areas from a green tourism perspective. The teams worked independently throughout most of the semester with weekly coordination meeting between all teams during class. During the last two weeks of the project the three teams worked together to develop a joint report and presentation for the county. The integrated report and presentation was given to the Director of Economic Development and the ACVS staff in late November 2009 with a formal briefing at the Johns Hopkins University Washington DC Center. The county was presented with a CD with an executive summary of the study, the power point study briefing and a complete list of references used in the study.

The instructor has continued to work with the county and participated in launching their green tourism initiative with hotels and other businesses in Arlington County Virginia. A number of large hotels, representing major national chains, have shown strong interest in adopting green practices and sharing experiences between their organizations. Many of the recommendations from the class study are now part of the proposed programs. The recommendation for green certification of hotels is still under evaluation by the county and maybe a potential class study area for the future.

Summary of the Green Tourism Project

Introduction

Global tourism has seen an exceptional growth in recent years and it is projected to double in the next decade. The industry impacts are social, economic, and environmental, also worldwide. Such an increase in tourism combined with change in pattern of travel could have a profound impact on heavily visited places. These impacts can be positive or negative.[4,5]

In the United States travel is a $77 billion market. Tourism brings additional income to local communities and will increase direct and indirect employment. But the increasing demand for basic goods and services from tourists will often cause price increases that negatively affect local residents economically and also environmentally. Tourism industry across the country/world has been trying to minimize negative impacts and to optimize economic benefits while maintaining a high level of tourist satisfaction.

Travel and Tourism Trends

Recently, the pattern of travel is also changing; People are visiting places of interest for a few days rather than long vacation of many weeks to a month. Protecting travel destinations for the future generations have taken a center stage along with sustainable tourism.[10,11] The tourism industry is responsible for about 5% of global CO2 emissions; transportation generates 75% of the emissions. The hotel industry accounts for approximately 20% of emissions, and activities such as museums, theme parks, and sporting events contribute remaining 3-5%.[5,11] Over the past

few years, the tourism industry, across the country and around the globe, has been trying to minimize its negative impacts to optimize economic benefits while maintaining a high level of tourist satisfaction.[1,3,7] Many countries, states, and cities have instituted programs to respond to the impacts visitors have on local environment.

In the last few years, the tourism industry has witnessed an increased demand from travelers to transform the way they travel while keeping a low carbon footprint. Achieving this goal is widely known as sustainable tourism. The concept of sustainable tourism is applicable to all forms of tourism, from mass tourism to niche tourism. Sustainable tourism should ensure a meaningful experience to the visitors, raise their awareness about sustainability issues, and promote sustainable tourism practices.

Programs and Standards for Green Tourism
The study analyzed how travelers approach their selection process and the tools that they use to choose their destination and accommodations. About 66% of travelers use the Internet to search for travel destinations in the United States with about 31% of those use major travel sites such as Expedia, Orbitz, and Travelocity.[2,10] These sites are consumer-direct travel services for leisure and business traveler. All three sites work with many partners to provide customers with options ranging from airlines, hotels, car rental companies, cruise lines, vacation, and other travel-related services. Many corporations also use these services as part of their corporate travel plans.

Expedia and Travelocity provide information on green hotels and destinations working with public and private entities. Many cities have established programs that rely on and allow the travel sites to provide information for travelers.[4,6,9] At the moment Orbitz does not have such options. While percentage of travelers who base their plans on green or sustainable travel is very small, it is projected to grow rapidly with more awareness.[6,12] Thus, it is imperative that Arlington County to have an awards program in order to reach the goal of green tourism.

There is no agreed upon global or national standards for effective sustainable tourism. Since Arlington has a diverse population that attracts many international visitors, the County could explore adopting United National Environment Programme (UNEP) Global Sustainable Development Criteria.[8,9] The Global Sustainable Development Criteria include demonstrated sustainable management, social, and economic benefits while minimizing negative impacts. Many cities including San Francisco, Miami, and Baltimore have already or are in the process of implementing the UNEP program.

Arlington Sustainable Tourism Development
Achieving sustainability measures in Arlington across its tourism industry could range from low-cost initiatives, such as energy-efficient lighting, to measures requiring greater investment, such as purchasing in more fuel-efficient vehicles or restructuring energy systems. Sustainable urban tourism development requires the participation of travelers, tourism industry, hotels, and all other relevant stakeholders. It also requires strong political leadership to ensure uniform application and consensus building. It is in this context, the Arlington County Convention and Visitors Service (ACVS) set a goal to support and leverage green initiatives in Arlington County and its tourism industry in order to promote environmentally sustainable urban tourism or green tourism. Tourism is a major industry in Arlington County being located just across the

Potomac River (see figure 1) from Washington DC. A number of the "Washington DC destinations" are located in Arlington County such as Arlington Cemetery, the Pentagon, Air Force Memorial, Marine Memorial, Fort Meyer and Washington's gateway airport Ronald Ragan National Airport.

ACVS requested the class to study best practices in the field of green urban tourism and recommend appropriate direction to achieve the aforementioned goal. The team researched to integrate existing community resources of public and private initiatives that are designed to communicate to visitors their environmentally conscious travel options. To address this challenge the project was organized into three broad areas of investigation:

- Buildings and accommodations
- Modes of Transportation
- Attractions & Visitor Services

The class was divided into three groups to separately research each of these areas from a green tourism perspective. The results of the group's efforts were then integrated into a final report and presentation to Arlington County.

Figure 1: View of the Arlington County Sky line across the Memorial Bridge from Washington, DC

Buildings and Accommodations
The study focused on other major category, Visitor Services, for options that are available for ACVS to explore current facilities and integrate them with accommodation facilities and transportation services. Explored options are many and include virtual visitor centers, installing green kiosks, providing a green tourism course through Arlington's concierge college, and expanding Enviro-Green Index that is already used by Arlington County and businesses to provide sustainability ratings. Since Arlington County is host to many national events such as Marine Corps Marathon and Army Ten-Miler, there are opportunities to reduce the carbon footprint of large events and outdoor attractions. Reduced reliance on landfills, increased use of composting for organic waste, and use of grey water are some of the options available to reach the milestone of green event planning.

Modes of Transportation
Every year, Arlington County hosts about 27 million visitors and Ronald Reagan National Airport is used by as many as 20 million passengers. Transportation is one of the key components that millions of visitors use to move around Washington, D.C. metro area. Thus, a holistic look at transportation is essential. While there are myriad options for transportation is available, the ACVS could integrate and communicate the options in a form that is "on demand" to its visitors.

The study considered all available transportation options, and the County's programs for a single mode of transportation. The modes researched include walking, taxi, shuttle, car rental, biking,

Metrorail, and Arlington's local buses (ART). All forms of transportation are interconnected for a multi-modal system. However, urban green tourism is not just about having multiple modes available but through communication and demonstration of the available options. Additionally, the study benefited from Toronto's experience of creating a green map that integrates all aspects of green facilities that exist in that city. The map would enable visitors to increase environmental responsibility, demonstrate support for the local economy, and provide rich experiences.

Visitor Services, Events and Attractions
In Arlington there are a number of local events that happen throughout the year that attached medium sized crowds. Other events such as the Marine Corps Marathon and the Army Ten Miler can attached in excess of 100,000 people. There are also attractions that draw visitors and local residents throughout the year. These include Arlington National Cemetery (figure 2), the 9/11 Pentagon Memorial, Air Force Memorial, the President Johnson Memorial and others. Sustainable strategies at these locations have a major focus on solid waste management and provision of bath room facilities. Education and simple to follow signage combined with adequate physical facilities and containers are key elements for success.

Figure 2: Changing of the guard at Arlington National Cemetery

Strategy to Implement
While there are opportunities that could be implemented in short-term, there are also long-term challenges in sustaining urban green tourism. Short-term goals could include educating hotels on the next generation of green accommodations. Such initiatives could include rewarding businesses that are complying with these goals by giving them credible outside recognition. Certification is a tool and the attainment process can teach businesses about better practices, even if the business never gets certified.

ACVS should consider focusing time and resources in the areas of buildings & accommodations, transportation, and visitor services to integrate existing community resources of public and private initiatives. This would allow ACVS to provide information to visitors about environmentally conscious accommodations and different modes of transportation that are available. In sum, these three pillars require time and resources to move Arlington towards being a green urban tourism destination.

Project Recommendations:
Each of the three study areas addressed in the study developed short term and long term recommendations for action.

1. Buildings and Accommodations
The short term goals identified were to educate hotels on the next generation of green lodging and to create a voluntary green program designed to become a stepping stone to implement the United Nations Environmental Program (UNEP) Green Certification Rating System. Many of the

hotels are already doing a number of green practices under a variety of industry and company programs.

The long term goals were to partner with the UNEP as the first county in the United States, and to have all hotels in Arlington adopt the UNEP's criteria. The final long term recommendation was to bring kiosks to the hotels to provide easy and current information to tourists on the many green options available to them while in Arlington and the surrounding area (figure 3).

2. Modes of Transportation
Transportation was a mix of modes and options for the Arlington visitor. In order to provide a set of focused recommendations the transportation sector it was divided into areas representing existing Arlington programs. These were 1) Walk Arlington, 2) Taxi, shuttle and car rental, 3) Bike Arlington, 4) Metro Rail and Metro Bus, 5) Arlington Transit (ART), and 6) Arlington Transportation Partners and Maps

Figure 3: Kiosk in central locations & near hotels for visitor use

a. Walk Arlington
One of the challenges in this area is that the walking trails and walkability of many parts of Arlington are not advertised at airports, Metrorail, Metro bus, and hotels or public spaces. Visitors have few ways of learning about this option. It is an area that mostly local residences know about and use regularly. The short-term recommendations were to; 1) Increase visibility of "walkable" information such as brochures & maps on how to get around, and 2) Brand Arlington's walkability with the Marine Corp Marathon and other running events.

The long-term recommendations were to; 1) Integrate Walk Arlington website into website design that also has links to other points of interest in Arlington, 2) Integrate a calorie counter into website design to calculate calories expended during walking journey between points of interest, and 3) Train hotel concierges to provide guests information on walking alternatives to points of interest.

b. Taxi, Shuttle, and Car Rental
In this area there are some appealing green options. There are two Arlington taxi companies that provide only hybrid cabs (for example Enviro-Cab) and the other taxi companies have a limited number of hybrid cabs. There are also hybrid standard rental car options and short term hybrid car rental options (Zip car).

The short term recommendation is to make available Arlington green tourism information in taxi cabs, particularly those that service hotels and airports. The long term recommendations are to: 1) Promote the use of hybrid or other high efficiency cars for rental and for taxi services, and 2) Create an incentive program for using hybrid or other high efficiency cars such as providing parking discounts from hotels.

c. Bike Arlington

For this area there was very limited information on bike rentals readily available to hotel guests. Also the issue of bike security for owners and renters in public spaces was important. There is a 113 mile bicycle network of trails, bike lanes and bike routes in Arlington and 500 bike racks available throughout the County. Further there is a new Arlington bike sharing program to be launched in 2010.The short-term recommendations were; 1) Hotels should provide information on biking options to their guests, 2) Increase security on bike rack locations, 3) Bikes in the bike sharing program should have baskets or provisions to mount bags (shopping). The long-term recommendations were to integrate the Bike Arlington site needs into the Arlington County website design to share points of interest to biking tourists.

d. Metrorail and Metro bus

The Washington DC Metrorail and Metro bus system is complex and would benefit from better ways of coordinating it with visitors that maybe arriving foot, bike, car or bus. The short term recommendations in this area are: 1) Marketing Metrorail and/or Metro bus over the taxi "door-to-door" less eco-friendly option because the metro system (figure 4 shows the metro rail route map) is easy, economical and enviro-friendly, 2) Work with final destinations to advertise their nearest Metrorail or Metro bus station/stop to promote green transportation options, 3) Post e-how.com instructions in website design, 4) Promote the use of the Metrorail and Metro bus on demand tools to visitors.

The long term recommendations would be to: 1) Develop an exchange with all defined sustainable hotels so that the hotel is clearly marketed on Arlington's website and the Arlington website travels with the e-confirmation from the hotel to the arriving guest, 2) Use the four commuter store locations as additional Visitors Centers for green transportation recommendations, and 3) Produce and display on You Tube "How To" Videos linked from Arlington's website.

Figure 4: Route Map for the Metrorail system in Washington DC and the surrounding area

e. Arlington Transit (ART)

The Arlington Transit (ART) system is a very good local transportation option but it does not have an on demand tool or trip planner tool which works in conjunction with Metrorail and/or Metro bus. ART also markets its services directly toward commuters and leaves out visitors. There are no visitor tools on the ART website. The short term recommendation here is to: 1) Advertise or market green Arlington locations or Arlington's website with ART, 2) Promote

ART for multimodal tourist travel within Arlington County, 3) Advertise the transportation hubs where all forms of transportation sync up. The long term recommendation is to develop a travel Arlington system trip planner tool to include the use of ART routes.

f. Arlington Transportation Partners and maps

The Arlington Transportation Partners Program has provided outstanding support to businesses and commuters in Arlington and the surrounding area. However, visitors to the area need to use multiple maps in tandem to get the full picture of transportation routes available to reach final destinations or sites in the Arlington and Washington DC area. To address this the short term recommendations are to: 1) Locate all maps together in a central integrated website design that is accessible with one computer button, 2) Promote the use of Arlington Transportation Partners Information Displays.

The long term recommendations were to integrate all available maps with the Toronto's approach with the "other map" serving as a prototype. Items for consideration for inclusion include biking and walking trails, gardens, parks and conservation areas, green accommodations and businesses, green restaurants and cafes, watershed information, local galleries and theatres, museum and heritage sites, organic and natural food locations and sustainable transportation.

3. Visitor Services, Events and Attractions

This area was divided into two sections to better address the differences between visitor services and the special opportunities at events and unique attractions.

a. Visitor Services

The short term recommendations were to: 1) Expand the use and types of kiosks into virtual visitor centers. This would include the placement of kiosks in all urban villages with links to web pages via wireless connection. The Arlington kiosk browser could then be used to turn any PC into a secure public kiosk in minutes, 2) Develop a Concierge College Green Class and curriculum that would highlight all the aspects of the Arlington Eco-urban Tourism Program. It could include green transportation options for guests, green restaurants within walking distance of hotels and how to be "green" at Arlington events and destinations, 3) Develop programs to educate visitors on the green options available to them while enjoying their visit to the Arlington area, 4) Use a centralized visitor friendly web site to link to partner programs like Go Green Virginia, Fresh AIRE, Transportation, National Park Service for Arlington Cemetery, Marine Corps Marathon website, etc. Also market on the site current green achieved by Arlington businesses, post a community calendar to showcase green events and a map of Arlington with links and high lights for transportation, hotels, restaurants, etc.

Long term recommendations included: 1) Development and promotion an Enviro-Green Index that could be used by Arlington County government and businesses that would calculate a sustainability rating, 2) Use the rating or something similar to track performance over time, and 3) Set a baseline for performance, track progress, set goals for improvement and reward accomplishments.

b. Events and Attractions

The short term recommendations are to: 1) conduct careful Green Event Planning for all major events particularly for the Marine Corps Marathon (see figure 5) and the Army Ten Miler, 2) Divert as much solid waste from landfills as possible, 3) Provide three types of receptacles at events stationed together designated for landfill, recycle and compost, 4) Provide Green Portable Bathrooms at central locations and in sufficient number, 5) Partner with local organic soil company to process compostable materials, 6) Use biodegradable utensils for all food, 7) Encourage attendees to use public transportation (small gift or discounted admittance for showing bus/Metro card), 7) Encourage attendees to bring own water bottles (provide free filtered water stations), 8) Use signs and banners to continually draw attention to your "green" efforts Arlington has implemented.

The long term recommendations were focused on two heavily visited and sensitive sites in Arlington, Arlington Cemetery and the Pentagon Memorial. The recommendations for these site are to provide: 1) A robust recycling program, 2) Compostable toilets, 3) Free filtered water stations, 4) Hybrid or electric vehicles for park employees, and 5) Preferred parking for bicycles.

Figure 5: Starting area of the Marine Corps Marathon near the Pentagon in 2009

Conclusions:

The sustainable tourism project for Arlington County was a success in multiple areas. It provided a real world project experience for the students in an area the county had a current need. The content of the research for the study was directly related to the course content for the semester. The quality of the project was very good and very well received by the county. The project provided the opportunity for multi faceted team activities where the students took on different roles within the teams during the semester. The level of their effectiveness in team activities continued to improve from the begging to completion of the project.

The effectiveness of the project can be measured from two view points: 1) how Arlington County rated the effort and 2) the results from student evaluations of the course. Although there was no formal evaluation completed by the county, the inputs received during the course of the project are representative of their satisfaction with the project. Comments make by the Director of Economic Development include:

- Much more detail and depth than expected
- Excellent work that will be very useful for the county
- Would very much like to do another project
  ACVS Staff:
- The recommendation are exactly what we can use in development of the county program
- Good research effort that identified areas we were not aware of
- This has helped us significantly in our program

From the student's perspective the course evaluation comments are good indicators of their ideas on the effectiveness of the class project. Some examples include:
- Provided excellent opportunities for interaction with other students
- Loved working on a real world project for Arlington County
- Great problem solving project environment
- Learned a lot about Arlington
- Class project was an excellent learning tool

The instructor has continued to work with the county and participated in launching their green tourism initiative with hotels and other businesses in Arlington County Virginia. A number of large hotels, representing major national chains, have shown strong interest in adopting green practices and sharing experiences between their organizations. Many of the recommendations from the class study are now part of the proposed programs. The recommendation for green certification of hotels is still under evaluation by the county and maybe a potential class study area for the future. Overall the class project definitely provided welcomed and useful input to the development of Arlington's Green Tourism Program and assisted in the assessment of the related public policy issues.

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