



# **HANDBOOK OF HYDROSCAPE DESIGN & COASTAL ARCHITECTURE**

**CONDENSED DOWNLOADABLE  
OVERVIEW OF SECTION 1**

**The following document should be cited as: Institute of  
Destination Architects and Designers. 2002. *Introduction to  
Coastal Architecture and Destination Design Issues in Practice*  
[www.idad.org](http://www.idad.org)**

## **COASTAL DESTINATION DESIGN**

**The ocean coastline of any nation holds great potential for the development of tourist destinations. Defined as part land and part sea, the coastal zone extends inland above the high water mark, and reaches out to sea beyond the low water mark. Residents and visitors, alike, are drawn to coasts for a wide variety of leisure activities. Major population centers of countries are located near the coast. Fragile and vulnerable ecosystems can be found in coastal zones. Trade and commerce of non-tourist industries depend on transportation and shipping opportunities that can be afforded by coasts.**

**Many demands are placed on the narrow zone of our planet we call the coast. With many competing entities vying for space, careful consideration of many stakeholders is critical in any development here. Landscape architects can lead the way in strategic development of coasts as tourist destinations. Specific and unique needs are revealed in the design of leisure-focused developments in the coastal zone. Some activities may prohibit other participants from pursuing their goals in the enjoyment or use of coastal space. Destination designers should weigh all the benefits and costs in development of leisure environments at the land/water interface.**

## **COMMUNITY NEEDS**

**The history and culture of host communities serve as a baseline for analyzing use of the coast. Because of weather, health, transportation technology and economic factors, the past role of a resource can change, resulting in dramatic or subtle evolution of the physical appearance, water quality and social importance of a place. All of a region's history should influence present or future uses for touristic, commercial and residential purposes.**

**Economic pressure may encourage creative re-use of coastal infrastructure that has become obsolete. Recreation and leisure**

**patterns in resident and visitor populations may focus attention on the potential for viable new development at or near the shoreline. Awareness of natural beach processes, unique habitats, and valued species can create powerful reasons to critically-evaluate all proposals of action in this environment. A designer has opportunity for enriching the lives of many people, but the responsibility to proceed cautiously.**

## **WORKFORCE CONSIDERATIONS**

**Employment opportunities for host communities often drive the interest in destination development efforts. In an era of industrial downsizing, plant relocation and technological reorganization, many “traditional” jobs have vanished, leaving behind a floundering workforce. Because destinations typically require a large service sector, jobs associated with providing accommodations, food, entertainment, and recreation activities can be created. Support networks of crews to provide maintenance, product delivery, security and construction can also provide dependable employment. Entrepreneurs will find an abundance of possible business opportunities that meet critical needs of host and guest expectations.**

**The provision of both local human capital and locally-supplied goods is essential for long-term sustainability of any tourist destination. Every community with traditionally-based work history will need to make transitions in their emphasis on career training. Tasks which once took large crews of skilled workers to accomplish have been transformed into those needing small technologically-sophisticated crews. A source of pride in the older, traditional skills is good for community morale, and coastal communities can maximize visitor interest in these historical references. New, tourist-based jobs can carry a new sort of pride in professionalism and quality service. Support industries that provide goods for visitors, either directly or indirectly, generate local identity and job satisfaction, as well.**

## **BEACH RESOURCE**

**The value of quality beach resources can be a coastal community's highest priority. For a large group of travelers, the beach experience, with its sun, sand and surf, is the most sought-after commodity of their vacation or holiday. Residents and regional frequent users also place a high value on "their" beach. The cleanliness, size, safety and typical weather of a sandy beach will determine its appeal, and thus its value. Destinations with beach resources are making efforts to protect and enhance their value.**

**Beach protection efforts have generally yielded net financial benefits for the community involved. For every monetary unit spent on beach protection strategies, a multiple of that money returns to the community in property value increases (Daly, 2000). Moreover, the usefulness of the beach to attract beach-goers, both active and passive, is multiplied. Storm protection is also enhanced through beach-building strategies. Many potential costs are thus avoided by this proactive approach at the shoreline.**

**Current practices of beach nourishment or renourishment are carried out by engineering organizations, like the US Army Corps of Engineers. The principles behind their efforts are being researched and should continually be re-evaluated as more understanding of coastal processes is known. Design of beach destinations will often include consideration of these strategies and others; therefore, landscape architects and other design professionals should become familiar with the potentials and constraints of such.**

## **GENERAL GUIDELINES**

**When coastal areas are being considered for development, some basic guidelines will help decision-makers choose wisely. First, the environment that makes the coastline unique, and thus**

**valuable as a destination, should be given top priority. Water quality is of the utmost importance in this aquatic environment. Sand dunes, native vegetation, and other distinctive landscape features give the coast magnetic attractive power for visitors, and provide residents a sense of place that cannot be disregarded. All design must address potential impact, both positively and negatively, on flora and fauna, topography, and natural water and wind processes at the coastal zone.**

**Next, the reasons for making such efforts in the environment must be understood and appreciated. People value this place, depend on this environment, and want access to enjoy a variety of leisure, commercial and residential activities here. Visitors and residents find pleasure in the appearance of coastal vistas, natural and man-influenced features of the coast, and activities that can only happen here. The environment itself, if healthy, makes possible vibrant populations of plant and animal species that can be found no where else on earth. This aspect alone has tremendous value to people, for entertainment and curiosity, as well as potential commercial uses, like food and drugs. The sport and commercial value of fisheries is significant in the world's coastlines.**

**Responsible public access to the coast is imperative to retaining meaningful land/water interface. By allowing people to interact with the coastal zone, both on land and in the water, the health and vitality of the resource can be appreciated and monitored. Designers can never shrink from the challenge to bring people into environments without destroying the places' beauty and value.**

## **RECREATION**

**The potential opportunities for recreation in the coastal zone must be recognized as powerful engines of both positive and negative outcomes for coastline health. When designers consider the primary, secondary and long-term consequences of**

**development to facilitate recreation activities, several key issues will arise. Location of access points, movement of people and their vehicles (boats and cars), waste management (people and animals), are three areas of concern that need design expertise. Open space and built facilities should be designed to retain the character of the coast and provide value and safety for the users, both visitors and residents.**

## **COLLABORATION**

**By involving citizens, special interest groups, government agencies, landowners, and businesses, a dialog among the various stakeholders can develop. Communication of existing plans, laws, and stakeholder interests can result in coordinated efforts to compose a destination design that will meet the needs and constraints of current use while looking ahead to future opportunities. The people who stand to gain or lose from design decisions should have input, beginning with local residents.**

**Knowledgeable consultants from coastal areas of concern, like life saving and marine wildlife, must be involved in providing critical guidance to decision processes. Coastal zones exhibit a wide range of potential problems and opportunities, and each community will work through issues unique to their circumstances. Designers realize there are no “cookie-cutter” solutions for the development of effective destinations. With an involved community of participants and expert consultants, a customized design solution, or master plan will emerge.**

## **INTRINSIC DANGERS**

**Any time coastal zones are developed for human habitation, commerce and leisure, there should be an acceptance of the dynamic nature of this zone. Tidal fluctuation, storm incidents, natural wave and erosion processes, dune movement and global warming consequences should all be taken into account as part**

**of the unique constraints and opportunities for coasts. Designers are responsible for people's safety and health; therefore, facilities must address concerns from structural soundness to life saving provisions.**

**Linkage of destination amenities to inland resources through transportation corridors is vital along coasts. Access to food, water and other critical necessities of human survival must be assured to those who live, work and visit in coastal destinations.**

## **DISTINGUISHING FEATURES**

**Existing features and uses of areas should be recognized for their cultural and aesthetic value. Historic landmarks, sensitive habitats and traditional coastal facilities should receive priority in design decisions. The retention of a community's "place-making" icons is critical to its effectiveness as a destination. This is true from the perspective of both visitor and resident.**

**Visitors find value in the distinctiveness of coastal destinations, even though the magnetism of certain elements may be evident in many coastal opportunities. While numerous beaches offer sunny days, clean sand, and clear water, travelers gravitate to qualities that are not found everywhere. For some, the additional lure may be unique shopping opportunities, for others the critical component may be surfable waves. Each destination should discover their own strengths and build on them.**

**As each host community works through the potentials of their destination, residents should carefully place priority on the aspects of their home region that they value. Physical attributes as well as "intangibles" should be weighed for value in the decision process of destination design. The most valuable feature that should be discovered and revealed in any host community is a welcoming attitude to visitors; effective destinations reflect a warm, hospitable resident population.**

## **BEACH SPECIFICS**

**When looking at the world's most visited tourist destination type, the beach, attributes have been identified that contribute to user satisfaction. Beach researchers have been consulted to discover the standards for beaches. From the Clean Beach Council, the Blue Wave Campaign promotes "clean and safe" beaches. Twenty-two criteria must be met to obtain "Blue Wave" certification for a resort beach, one that has been developed with visitors in mind. Rural beaches have limited facilities, although promoting considerate visitor use; they must meet fourteen criteria. Stephen Leatherman (Dr. Beach), of Florida International University, author of fifteen books and dozens of journal articles, has compiled a list of fifty criteria for the Healthy Beaches Campaign. Beaches earn a score based on positive and negative ranges for everything from color of sand to presence of biting flies.**

**The Healthy Beach Campaign and the Blue Wave certification program are both voluntary, non-governmental, non-profit efforts intended to give beaches a standard by which to measure their resource. By examining the attributes promoted by these organizations, architects can help destinations achieve desirable beach conditions. For attractant value in the competitive tourist industry, design professionals must be aware of these critical beach parameters.**

**Some of the attributes listed are clearly within the scope of specific design interventions: provision of restrooms and drinking water within walking distance of the beach, strategic placement of information and emergency phones, safe access for all, erosion management and habitat conservation. Other attributes highlight constraints that are outside the power of designers to mitigate, but may help guide early decisions about the basic desirability of beach resources: number of sunny days, amount of rain, and wind speed.**

## **REFERENCES**

**Daly, J. 2002. Recreation and sport planning and design.**

**www.dr.Beach.org**

**www.oceanconservancy.org**

**www.cleanbeaches.org**

**Houston, J. 2002. *The Economic Value of Beaches - 2002 Update.* US Army Engineer Research and Development Center.  
**www.virginia shoreandbeach.com****