

## The Transect

Light Imprint is a transect-based stormwater management system. A transect of nature, first conceived by Alexander Von Humboldt at the close of the 18th century, is a geographical cross-section of a region intended to reveal a sequence of environments. Originally, the transect analyzed natural ecologies, showing varying characteristics through different zones such as shores, wetlands, plains, and uplands. It helps study the many elements that contribute to habitats where certain plants and animals thrive in symbiotic relationship to the minerals and microclimate.

Human beings also thrive in different places. There are those who prefer an urban center; there are those who favor life in a rural hamlet. Humans need a system that preserves and creates meaningful choices in their habitats. Near the close of

the 20th century, New Urbanist designers recognized that sprawl was eradicating the pre-war American transect of the built environment. They began to analyze it and extract its genetic material for replication. In this way, they extended the natural transect to include the built environment, thus establishing the basis for the SmartCode.

The rural-to-urban transect is divided into six transect zones for application on zoning maps. These six habitats vary by the level and intensity of their physical and social character, providing immersive contexts from rural to urban. SmartCode elements are coordinated by these T-zones at all scales of planning, from the region through the community scale down to the individual lot and building.

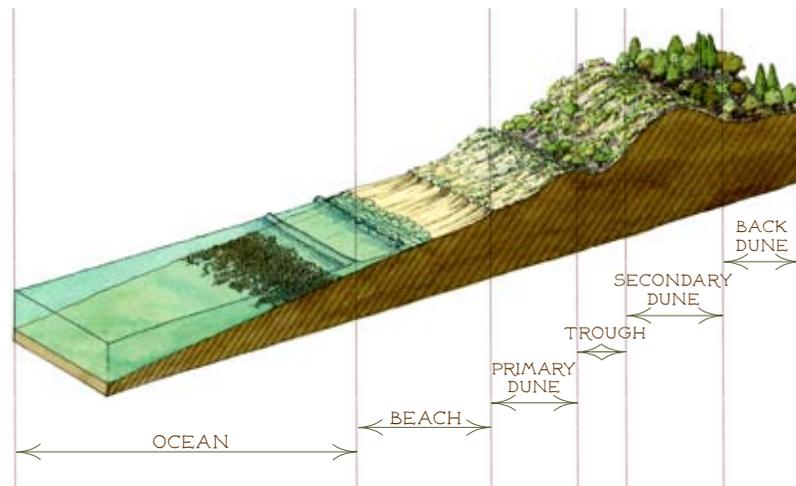
One of the principles of transect-based planning is that certain forms and elements belong in certain environments. For

example, an apartment building belongs in a more urban setting, a ranch house in a more rural setting. Some types of thoroughfares are urban in character, and some are rural. A deep suburban setback destroys the spatial enclosure of an urban street; it is out of context. These distinctions and rules don't limit choices; they expand them. This is the antidote for the one-size-fits-all development of today.

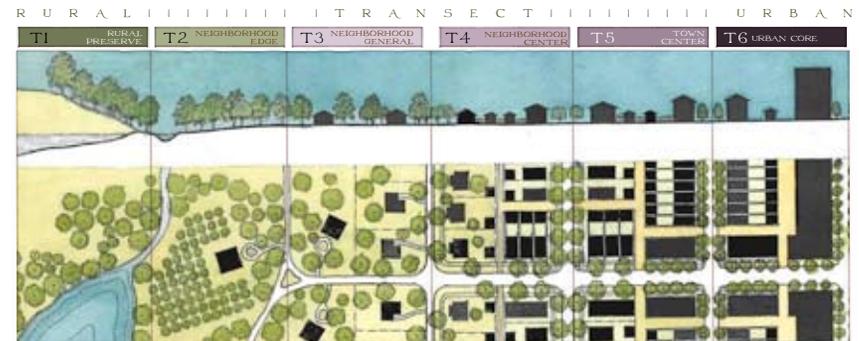
The transect is evident in two ways. Zones and communities (1) exist as characteristic places on the transect and (2) they evolve along the transect over time. As places, the six transect zones display identifiable characteristics, based on normative American urban patterns. They also increase in complexity, density and intensity over a period of years, until a climax condition is reached. This is a growth process analogous to succession in natural environments.

The best urbanism requires the sequential influence of many participants. A code based on the transect allows buildings to be designed and built by many hands over years, or even generations. The single designer or committee leads to a lack of robustness, similar to vulnerable monocultures in nature. A parametric and successional code like the SmartCode allows experience to feed back and become integrated -- the fourth dimension of time. Once adopted, it stays in place, allowing urbanism to evolve and mature without losing its necessary foundation of order.

It also ensures that a community will not have to scrutinize all proposed projects, because the intentions of the citizens will have already been determined in the process that leads to the code. The SmartCode is a comprehensive framework for that process.



A Natural Transect



A Rural to Urban Transect

The text and diagrams are taken from SmartCode Version 9.0.