

## SETTLEMENT DEVELOPMENT

Within the framework of the overarching location model, a settlement development model has been developed using transportation networks as the means by which the Delmarva region is linked into a systemic whole.

As discussed earlier, transportation is a major factor in settlement development (Morrill 1974:136), not only on a regional scale, but also at the settlement level. The processes of transportation route development and settlement location and development are so interwoven that it is particularly difficult at this time to isolate them. The following transportation route ranking has been devised in an attempt to isolate transportation route factors. This typology is based primarily on distance, amount of connectivity, and means of transport, and is a revised version of that developed for use in Alexandria, Virginia (Klein and Henry 1980).

### TRANSPORTATION ROUTE RANKING SCHEME

#### A. Water Routes

1. Trans-Oceanic (e.g., - Philadelphia - London)
2. Coastal (e.g., Philadelphia - New York)
3. River (e.g., Philadelphia - Wilmington)
4. Canal (e.g., Chesapeake - Delaware Canal) (Phila. - Baltimore)

#### B. Surface Routes

1. Inter-regional roads (e.g., I-95) - those routes that extend beyond a region's boundaries, the region in this case being the Delmarva Peninsula south of Pennsylvania.

2. Intro-regional connectors (e.g., Del. 896) - major routes within a region that intersect at least once with an inter-regional road.
3. Local access feeders (e.g., farm roads) - small routes within a region that may or may not connect to intra-regional roads, but which provide access to the hinterlands of the region. Residential streets in housing developments or urban areas may be considered Local Access Feeders.

#### C. Railway Routes

1. Inter-regional lines (e.g. Philadelphia-Baltimore) - extend beyond the region's boundaries, and may have few stations in proportion to route distance; may have several tracks on one bed.
2. Intra-regional connectors (e.g., Wilmington-Dover) - may have high station-to-distance ratio, with one track.
3. Local spurs - extend short distance from intra-regional connector or inter-regional line, with one station at its terminus and one track.
4. City trolley - provides passenger transport within an urban area, and has been shown to have been an influential factor in internal settlement development (Hoffecker 1974:37-39). It is expected that only the largest settlements will have trolleys.

The following presents a tentative hierarchical typology of settlements within a region. Although most hierarchical settlement typologies have been based primarily on economic factors (central place hierarchies are most noted (see Beavon 1977), such schemes do not take into account other conditions that influence settlement development. For example, economics alone cannot explain the existence of Washington, D.C., Atlantic City, N.J., or Vatican City in Rome.

Therefore, several other factors, such as relative size, settlement functions and structural density, have been utilized as well to distinguish one settlement type from another. Other researchers (see discussion in Beavon 1977:43-49) have devised settlement hierarchies based on population size and number of businesses. Although these two variables would provide useful economic information, they would have to be utilized in conjunction with other social factors. In addition, it was felt that the collection of such data for each settlement under study would be prohibitively time consuming, if not impossible. There are no strict boundaries between types - settlements are actually arranged along a continuum but the typology is simply a heuristic device to facilitate analysis. Moreover, this typology may be considered a series of hypotheses on internal settlement patterning, since it is based only loosely on other research (e.g., Lewis 1976; Cressey 1980; Blouet 1972; Beavon 1977; Lemon 1974; Wise; 1980). The typology has been developed to be applied at any time period, although there are certain characteristics specific to particular developmental phases, which are discussed.

### SETTLEMENT TYPOLOGY

1. Homestead - The homestead is the basic settlement unit and consists of the land, house, and outbuildings occupied by a small number of people, usually (though not always) a family. A homestead can be a 500 acre farm or a property lot in a large city.
2. Hamlet - A Hamlet is a small cluster of homesteads. Internal settlement pattern is irregular, showing no evidence of planning. Initial function of the Hamlet may be kin-related (the homesteads of one family clustered together) or associated with the presence of a church. There may be a few part-time specialists, such as a blacksmith, providing goods and

services to a limited area.

3. Village - The village is larger, in terms of area and population, than the Hamlet. Internal settlement pattern may be irregular, especially if the village grew from a Hamlet, or it may be planned. The village may function in local commerce as a small scale trading center, and may contain, for example, a store, an inn, and/or a blacksmith. The village may also have a post office, a church and a school, providing a few minor governmental functions and several important social functions. There may be little spatial segregation in terms of social status or land use.
4. Town - The town is larger than the village. The homestead density to Town area ratio is still fairly low, but higher than that of the village. Internal settlement pattern is usually planned, (i.e. regular placement of streets, often in a grid pattern), but may exhibit areas of irregularity if the town has grown from an unplanned village. The town is a major economic and social focus of the sub-region within which it is located. The town is usually a minor, though important, participant in inter-regional trade functioning often as a transshipment point. Due to this economic function, the town offers a greater range of goods to consumers in the sub-region and more employment opportunities. Small scale manufacturing and greater specialization in production are evident. The town also serves important social functions by providing church activities and "town hall" recreations such as travelling entertainment and school activities. The town may also serve as the focal point for the political and/or judicial administration of the sub-region.

The town exhibits changes in its internal settlement pattern over time, primarily as a result of population growth, although other factors are influential. The temporal trend is toward internal spatial consolidation, some spatial segregation, and growth in spatial size.

One type of town has special chronological importance - the "Frontier Town" of the 17th and early 18th centuries. Lewis (1976) has presented a model of the developing frontier in which the Frontier Town is the focal point for all economic, political, social, and religious activities of the frontier and serves as the only link between the frontier and the homeland. In these functions, the Frontier Town may better be termed a City (see discussion below), but because this type of Town exhibits a low ratio of structures to area, it is called a Town. In addition, the Frontier Town does not appear except in a frontier situation (the initial Colonization stage of Hudson's (1969) model). It has, therefore, been considered a special type of Town pertinent only to a specific stage of settlement and time period (usually 17th to early 18th century on the east coast). Internal settlement pattern is characterized by dispersed homesteads, concentrated along the major transportation route(s), and little spatial segregation in terms of land use or social status. The Frontier Town is primarily a marketing center, transporting raw materials and semi-processed goods to the homeland and receiving processed goods in return. Depending upon the degree to which other factors influence the Frontier Town's development, its inter-regional functions and regional importance either may decrease, leading to equilibrium or decline, or these may increase, resulting in a City settlement type.

5. City - The City is larger than a Town, and has a high ratio of homesteads to area. There is usually only one within a region. Internal settlement pattern is planned, and spatial expansions resulting from growth are usually planned. The City fulfills major inter-regional economic functions, and may perform important inter-regional political, judicial, and social functions. The City is the major focal point within the region for economic, political, judicial, and social activities. Large scale manufacturing is present. In addition, residents of the City are dependent upon the hinterland for subsistence items. Cities develop from Town settlements given the presence of favorable factors influencing settlement development such as population growth, position in relation to other towns and cities, and/or access to raw materials.

In terms of chronological development, two special types of City can be identified within the general framework of the City characteristics just discussed. The first is the Mercantile City typical from the mid 18th to the early 19th century, the second is the Industrial City, characteristic from ca. 1830-1900.

- (a) Mercantile City - The focus of a Mercantile City is on merchandising, shipping, and bulk processing. The Mercantile City has often grown from a Frontier Town, and internal settlement pattern exhibits continued consolidation. Settlement density increases as competition for prime locations along major transportation route(s) increase. Spatial segregation in terms of social status and land use begins to occur and becomes

increasingly apparent through time. Multi-use structures (e.g., commercial first floor, residential second floor), high status residences, and small scale refined crafts tend to be located along the major transportation route(s); while low status housing, bulk product handling, light manufacturing and heavy crafts tend to be located on the outskirts (see Sjoberg 1960:323-324). Workers, however, live near their jobs.

- (b) Industrial City - The development of an Industrial City from a Mercantile City is dependent upon innovations in technology and transport that occurred ca. 1800 (e.g., steam power, railroad). A city may be termed Industrial, even if it has no industry or railroad, due to the fact that it is the recipient of industrial consequences in another city. Industrialization, through more efficient production and transport, made a wider range of goods, services, and employment available to those residing in the City and its surrounding region. Spatial segregation in terms of land use and social status continues and becomes quite apparent in the few decades before 1900. High status residences tend to be located on the outskirts of the City, while low status residences, bulk product handling, light manufacturing tend to be located in the City core near the railroad and heavy industry. Financial, mercantile, and small scale craft operations tend to be located in the City core, but these workers live elsewhere. Residential neighborhoods are loosely related to social status and occupation. In addition, there is increasing social stratification and differentiation in consumer behavior.

As discussed earlier, the developmental processes of settlements and transportation networks are intertwined to such an extent that it is difficult to isolate factors influencing one but not the other. But since it has been stated that major transportation routes connect larger places, while lesser routes serve smaller places (Morrill 1974:132), the following chart presents hypothesized relationships between settlement types and transportation routes.

Settlement Type	Water				Surface			Railroad			
	Trans-Ocean	Coastal	River	Canal	Inter-Region	Intra-Region	Local Access	Intra-Region	Spurs	Trolley	
Homestead	.	.	+	.	+	+	*	.	.	-	-
Hamlet	.	.	+	.	?	+	*	.	.	?	-
Village	.	?	+	+	?	*	+	.	+	+	-
Town	?	+	+	+	+	*	+	+	*	+	-
Frontier Town	*	+	+	+	*	+	+	-	-	-	-
City (M & I)	*	+	*	+	*	+	+	*	+	+	+

- .
  - \*
  - +
  - ?
  -
- (Intersections of one type with another and crossroads increase probability.)

### FACTORS AFFECTING SETTLEMENT DEVELOPMENT

The several factors previously mentioned as important in influencing settlement pattern are also influential in settlement development.

1. Economics - Of primary concern for settlement development is the