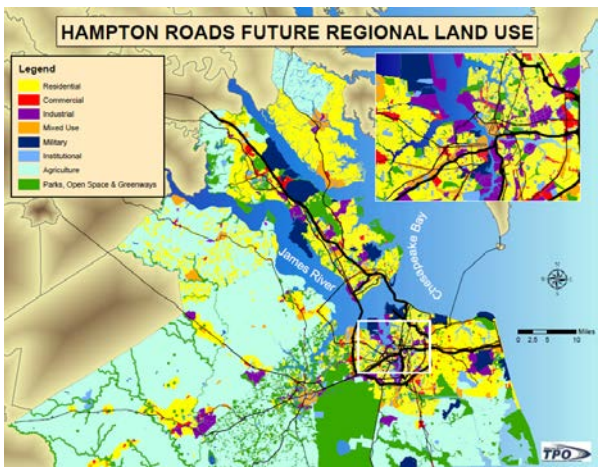
Place Types in the Regional Connectors Study

Overview

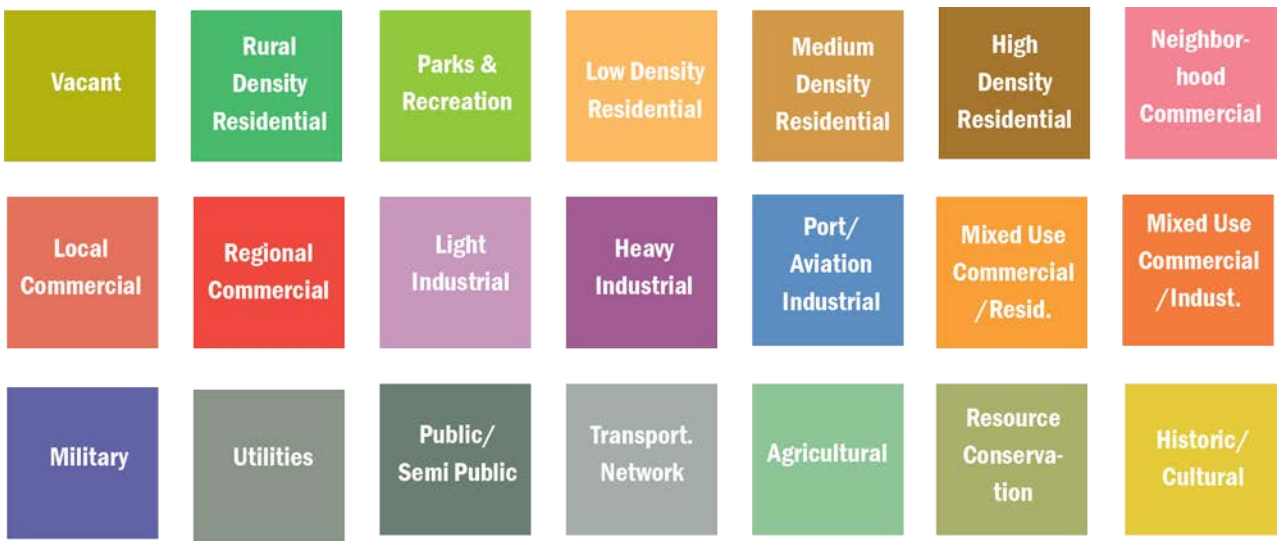
Place Types are used in the modeling for the Regional Connectors Study as a way to allocate potential future growth and ensure that it is in accord with the region's localities and their future growth policies. The Place Types used in this study come from the Hampton Roads Regional Land Use Map, which was compiled by HRTPO staff originally in 2011 and has been updated regularly by the HRTPO. It shows both the current and future (2045) land uses for each parcel within the Hampton Roads area.



HRTPO's Regional Land Use Map

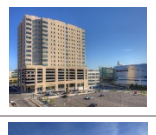
The HRTPO Board-approved Regional Land Use Map is comprised of the comprehensive plans of the 16 member jurisdictions of Hampton Roads as a representation of each jurisdiction's current and future land use policies. In July of 2019, updates to the GIS version of the map were completed by HRTPO staff by working with member localities to ensure completeness of the map. The map was shared with staff from each member locality to ensure accuracy.

There are a series of 21 regional land uses in this regional land use dataset that were developed by HRTPO as a summarization of each of the comprehensive plan future land use categories of the member jurisdictions, as shown below.



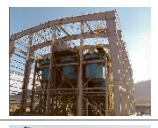
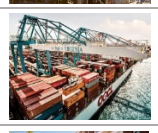
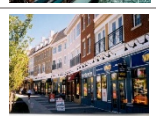
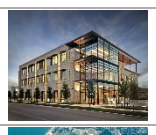
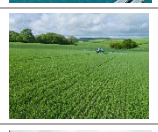
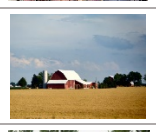
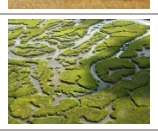
Place Type Development

These regional land uses were used as the Place Types for the land use modeling for both the Baseline and Greater Growth Scenarios in the Regional Connectors Study. For each of the 21 Place Types in the dataset, map sampling and calculations were done in several locations in the region to determine the land use characteristics and typical densities of each Place Type. This allowed a table to be built of the features and characteristics of each Place Type, as shown below.

Code and Name[1]		Examples		Dwelling Units/Acre Range	Floor to Area Ratio Range	People / Acre[2]	Jobs / Acre	Description
RR	Rural Residential			0.1-.9	-	0.4-3	0	Very large lot single family homes in a rural context interspersed with some agricultural uses
RLD	Low Density Residential			1-3	-	4-10	0	Large lot single family homes in a low-density suburban context
RMD	Medium Density Residential			4-12	-	10-36	0	Attached homes and small lot single family homes in a moderate density suburban or urban context
RHD	High Density Residential			13+	-	37+	0	Multifamily apartments and condominiums in a high density urban or suburban context
CN	Neighborhood Commercial			-	.1-.3	-	5-10	Limited scale shopping, business, or trade activity
CL	Local Commercial			-	.1-.3	-	11-20	Inter-neighborhood shopping, business, or trade activity
CR	Regional Commercial			-	.4+	-	21+	Regional shopping, business, or trade activity
IL	Light Industrial			-	.05-.3	-	7-15	Light industrial uses (Research & Development, warehousing, service, etc.)

[1] Note that all Place Types are assumed to be single land uses except for the Mixed-Use ones

[2] Population and employment density/intensities were developed by sampling place types in localities throughout the region and averaging the results but are expressed in a range of densities and intensities.

IH	Heavy Industrial			-	.05-.8	-	15+	Heavy industrial uses with possible adverse environmental impacts (manufacturing, etc.)
IPA	Port/Aviation Industrial			N/A	N/A	N/A	N/A	Port, General and Commercial Aviation related industrial operations
MCR	Mixed Use Comm/Res			4+	0.6+	10+	20+	Commercial/ residential mixed use activity
MCI	Mixed Use Comm/Ind			5+	0.6+	12+	30+	Commercial/ industrial mixed use activity
MM	Military			N/A	N/A	N/A	N/A	Military related facilities
IU	Utilities			-	-	-	1-3	Utility facilities
IP	Public/Semi-Public			-	-	5-10	30-60	Government/Educational/Religious/Social or healthcare facilities
IT	Transportation Network			-	-	-	-	Transportation facilities
AA	Agriculture			.01-.1	-	.03-.3	.03-.3	Agricultural operations
V	Vacant			-	-	-	-	Vacant developable lands
NP	Parks and Recreation			-	-	-	-	Open space and recreational uses
NC	Resource Conservation			-	-	-	-	Conservation lands
NH	Historic/ Cultural			-	0.1+	3-5	6-12	Historic Preservation / Cultural uses

Use of Place Types in Scenario Building

The Regional Land Use dataset was integrated into the Land Use Scenario Planning model using CommunityViz software. Each polygon in the land use dataset was assigned a specific Place Type based on the Regional Land Use dataset. As the land use model assigns the Greater Growth totals for population and employment in the region, they are associated with a Place Type based on where the growth is allocated. This allows a spatial mapping of the Greater Growth by Place Type and all of the characteristics (such as land use, density, household characteristics, etc.) associated with the Place Types. Note that additional density capacity was allowed in the Place Types for the Greater Growth allocation.

Translating Place Types into the Travel Demand Model

Once the Greater Growth allocation for each scenario has been completed in the Land Use model, the results of that modeling will be transferred to the Travel Demand Model (TDM). The growth allocated to each Place Type polygon will be associated with the Travel Analysis Zone (TAZ) geography in the regional TDM. This will tell the TDM exactly how much new growth has been allocated in each TAZ and what the specific characteristics of that growth are. This information will allow the TDM to analyze the new distribution of traffic resulting from each Greater Growth Scenario, and ultimately will inform the RCS process as to how the transportation network might perform under alternate future conditions and land use growth patterns.