Installation

Install using the Unity Package Manager or Drag the install file into your Assets Folder in a Project Window in the Editor.

After the files have been unpacked and are inside your Assets Folder look under the s3v3n3 folder for the corresponding Pipeline support file. Select the option that matches the Render Pipeline you are using then select a lighting model. Selecting the wrong pipeline will result in Materials not rendering correctly.

Quick Start

To create a Road Layout simply activate or deactivate the features according to your needs then click on the "Build Roads" button. If you have Hills and Valleys and are using Unity Terrain then after the Road Layout is completed click on the "Rebuild Terrain" Button.

You may want to use the provided Scene Builder utility to get a Terrain, Camera and Post Processing Effects head start to your project. Scene Builder will setup basic lighting and effects so that you can quickly get started but is not required for Road Builder to function.

Road Builder Features

Random / Seed

Clicking the "Random" or "Seed" buttons will choose between completely Random layouts and predictable re-creatable layouts. Random mode is purely random and in Seed mode you can enter a number which will generate the same road layout each time depending on the number.

Terrain Activated Button

When activated the tool will work with and modify the existing Unity Terrain in the scene. Disable this if you intend to manually create your ground area or do not want any modifications to the existing terrain.

Hills and Valleys Activated Button

When activated roads will be created with some random possibilities of Hills and Valleys. If Not activated roads will all be flat.

Horizontal and Vertical Settings

These determine the size of the outputted Road Layout. If using Unity Terrain with this make sure your terrain Width and Height of the terrain is at least slightly larger than the Road Layout.

Each Road section is about 39m so for example if your Road Layout is 18x18 then your Terrain should be at least ((39*18)+78) X ((39*18)+78) or (782 X 782) .

Of course making the terrain even larger is fine. Most Unity Terrain settings should produce acceptable results however if you set the height-map resolution or alpha-map resolution too low you may encounter issues that require manually adjusting the terrain to get acceptable results.

Alternate Roads Button

When activated roads will be created with possibilities of Road Piece Substitution. For example roads that are 90 Degree turns may be substituted with a Smooth Round Corner or 4 Way Intersections may be substituted with a little overpass.

Add Details Button

When activated this will add Signs and Traffic Lights randomly.

Random Medians

When activated this will add Road Medians to the middle of some roads.

Add Trees

When activated this will add trees to the side of the road.

Use Road Flaws

When activated this will include random road details that are less perfect and more realistic in look.

Use Alt Textures

When activated this will substitute key Road Materials with the materials saved in the Resources\Materials folder. If you choose to edit these or even replace them make sure you name the replacement textures similarly to existing textures. The first Number and the TPX# should be

maintained, do not delete and materials in this folder without replacing them and keeping them in the EXACT order they exist before any editing.

Use Alt Sidewalks

When activated this will enable the alternate sidewalk objects which is just a slightly different sidewalk design.

Add Main Street

When activated this will add a wider road horizontally and vertically at or near the center of your layout.

Add Rail Tracks

When activated AND when "Main Street" is also activated this will add a rail track to the center of the "Main" road.

Add Point Lights

When activated this will add point lights to some intersections for night scenes.

Starting Center Tile

This section allows you to modify the Starting Center Tile which defines the Road Layout. You may select any basic Road shape or set to Random.

Rebuild Terrain

Click this after a Road Layout has been created. It will modify the terrain to align with the roads.

Refresh Trees

Click this to randomly change all trees in the scene.

Roads Only

Clicking this will set most features to Inactive so that only roads will be built. This is just s shortcut to unchecking each option individually

Roads All

Clicking this will activate all features. This is just a shortcut to activating each option individually.

Road Lines

Clicking this will cycle through various Road Line Options on the standard sized roads.

Road Lines Wide

Clicking this will cycle through various Road Line Options on the wide sized roads

Modifying Game Objects or Scripts

You may modify the code in the Road Builder script as you like for your projects and use. Additionally you may also replace the provided Game Objects with your own or you may edit the provided assets as you like. Any custom modifications made are your own responsibility.

Below are some guidelines you must follow if you are going to make modifications. Failure to follow these guidelines may result in the failure of the Road Builder tool.

Objects in the Resources folder

Generally speaking these can be replaced, edited etc. However keep in mind the number of Objects in each folder as well as the order in which they appear are critical. Make sure to name the objects similarly to the existing ones and not to remove anything without replacing something similar.

Some folders, such as the "s3v3n3\Roads\Resources\Trees" or "s3v3n3\Roads\Resources\Variety" folders you may simply add or delete files in any number or any order as long as there is at least one present. For example you can replace the trees in that folder with your own and use as few or

many as you like. The other resources folders are very specific and be careful when making changes to those folders.

Code Modifications

You may modify the C# Editor Scripts that were provided. Keep in mind that any changes you make may cause the Editor Tools to stop functioning so use caution.

The script is under the "s3v3n3\Roads\Scripts" Folder and is called RoadsEditor.cs

Again, use caution when editing this script.