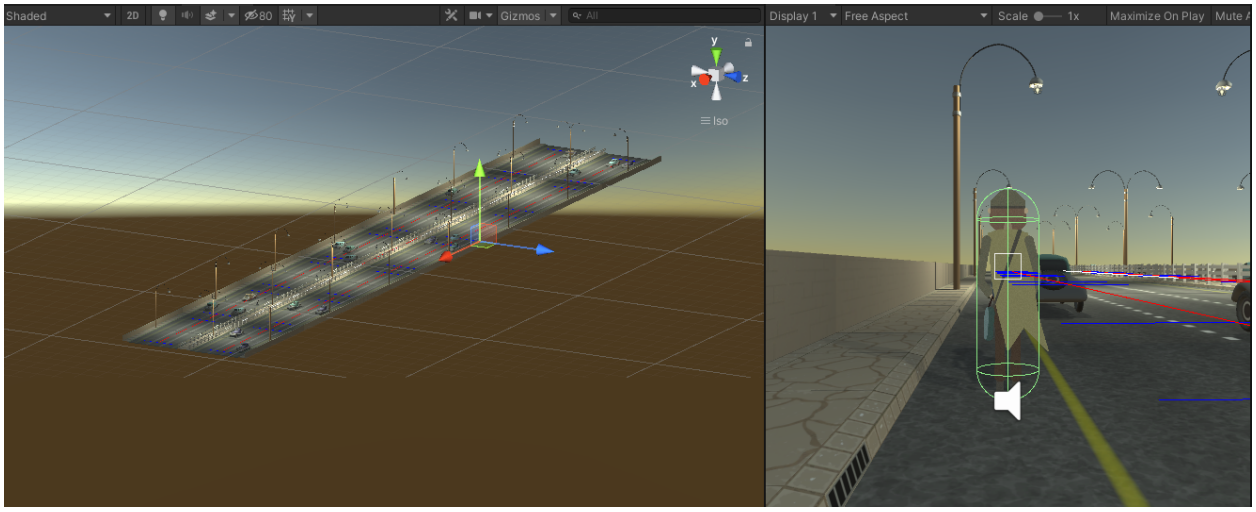
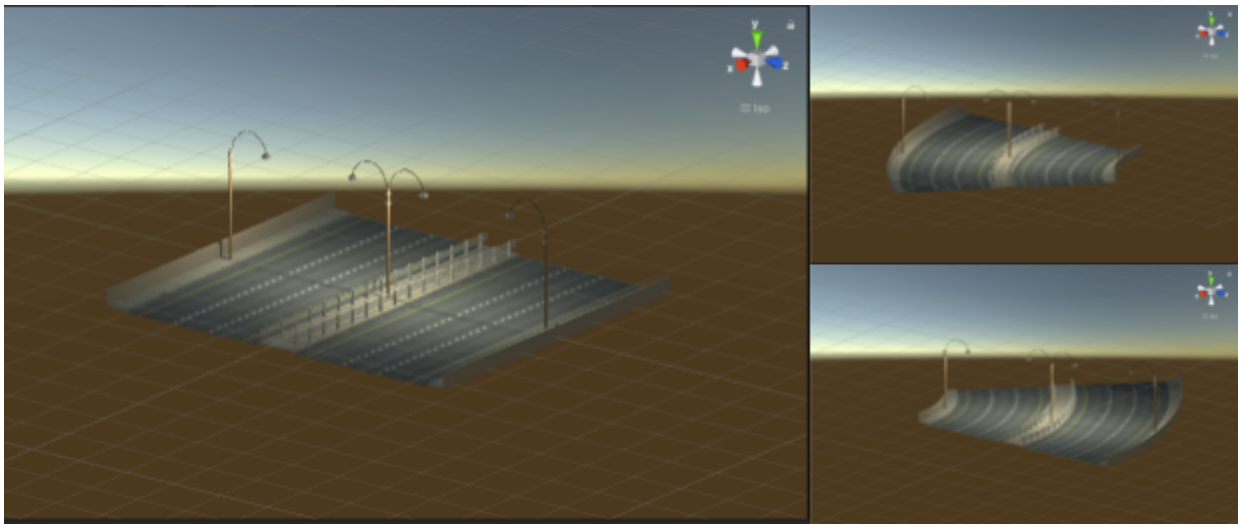
Very Convoluted Street “Chunk” Loading



Given a player’s position and a cyclic street, how can we spawn in more chunks of street and delete farther chunks as the player traverses the world to give an illusion of an infinite street?

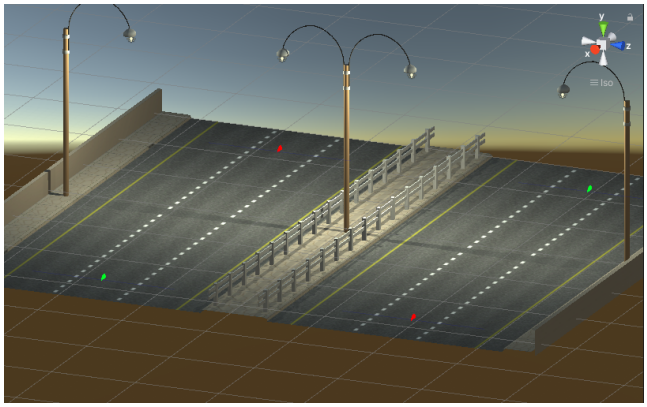


We will divide the street into blocks of 3 variants: *straight, 45° curvature, and -45° curvature*. Each street block is indexed from 0 to 2 signifying its variant. Each street has a path_next and a path_prev signifying where the next/previous block should be spawned relative to that block.

Given an array of indices signifying a street path, construct a finite path of streets of radius *r* (where *r* is the number of active blocks). Take the middle index of that street and calculate the player's distance along the path from that middle chunk. Should the player's distance exceed a max distance in a "forward" or "backward" direction, spawn in the next block and delete the farthest. Thus *r* is maintained such that there is alway only *r* chunks loaded in the scene.

Spawning Cars

Choose a random time between a max and min wait time, and spawn a vehicle from the last loaded street block. Also when the scene first loads, spawn in random cars along each of the street blocks to have an initial population. When the cars drive off the map, delete them



Every street has two sets of start and final waypoints (green is start, red is final in the image). A way point has a next and prev pointer. When a new block is spawned, these waypoint pointers must be updated. When a car spawns, we lerp from start to the next waypoint. If a car finds the next way point is null, we delete it.