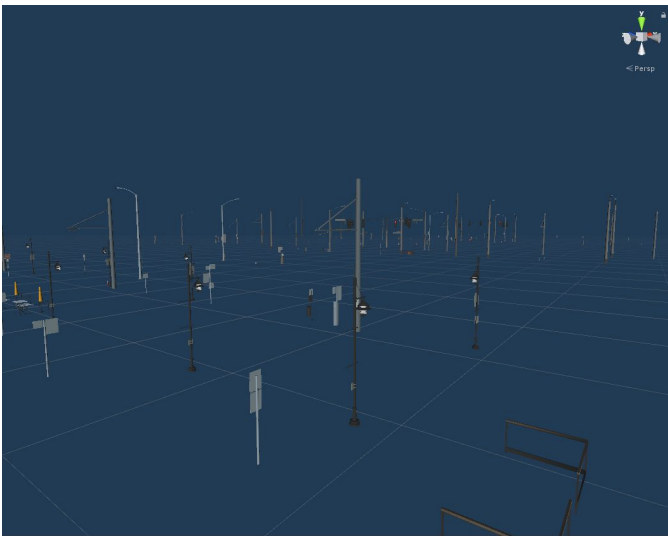


Asset Import Requirements and Strategy

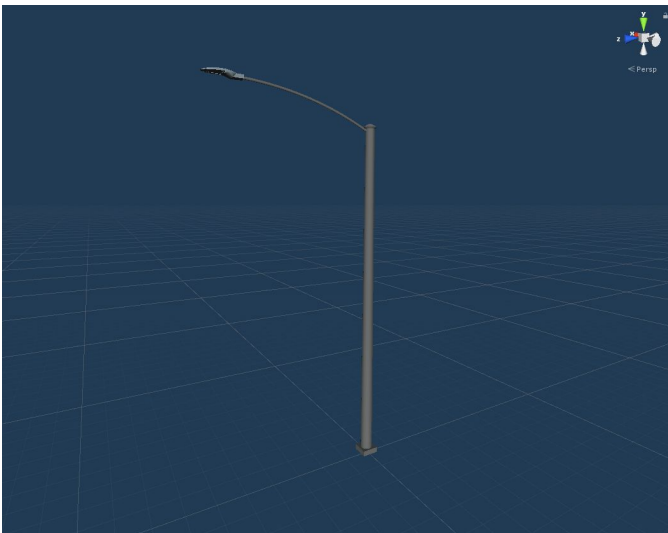
Mesh

- Individual assets should be separated into multiple FBX files.

Packed FBX example:

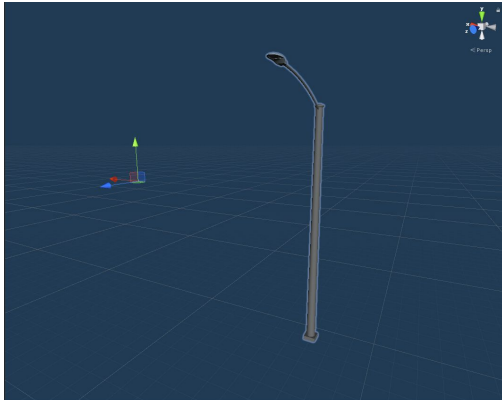


Unpacked example:

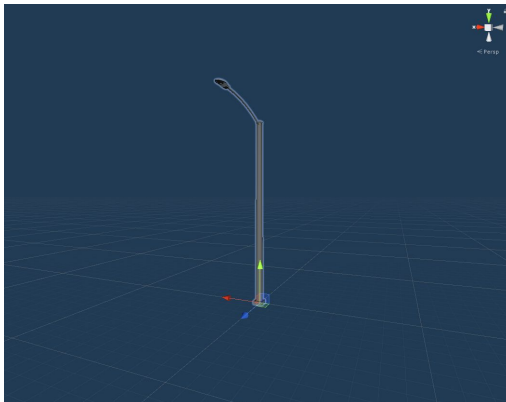


- The pivot of an imported mesh should be located at the center of base the mesh to simplify automated placement

Incorrect Pivot:

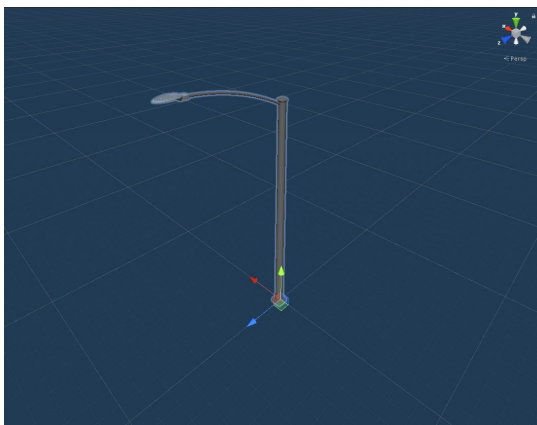


Correct Pivot:

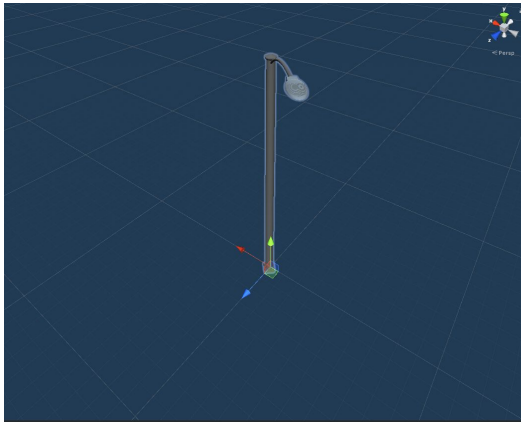


- Meshes should be oriented such that the front of the mesh is pointing in the positive Z direction in the unity coordinate system so objects may be contextually oriented when procedurally placed

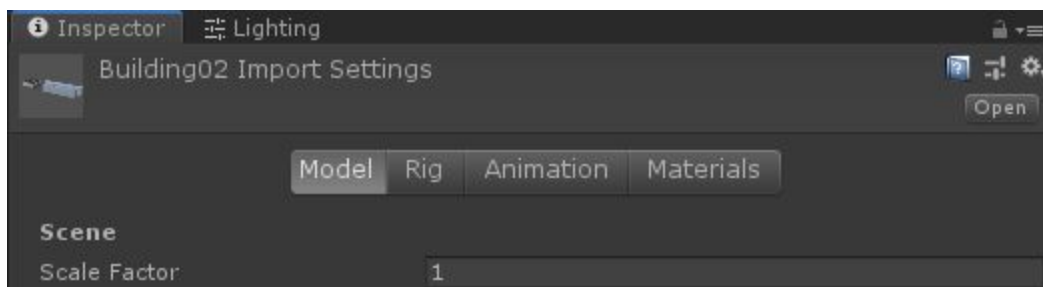
Correct Orientation:



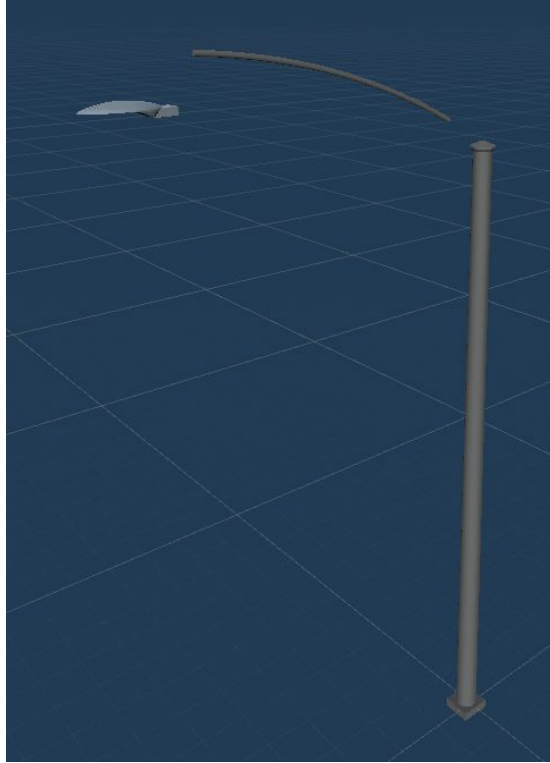
Incorrect Orientation:



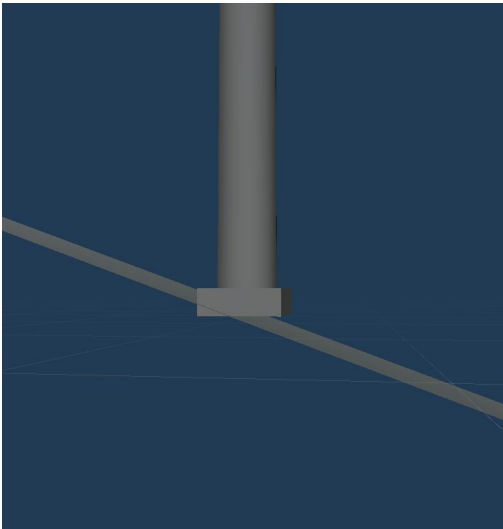
- Meshes should be constructed exactly per manufacturers' specifications, and exported in meters. This can be specified in the FBX export dialog.

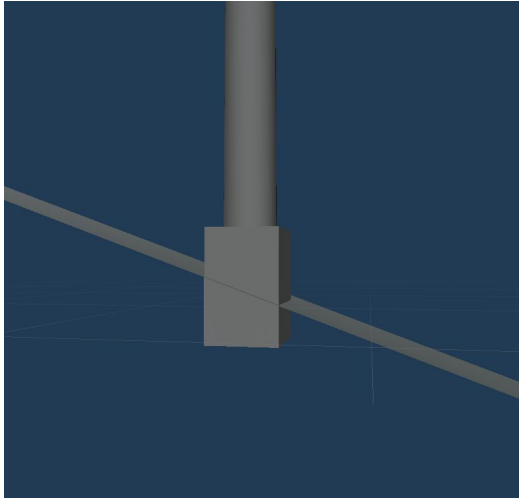


- Major object elements should be separated into individual meshes for automated collider mapping.
 - Example: Street lights are typically offered in many configurations of pole, armature, and luminaire. Therefore, a typical one arm street light would be constructed as a pole, arm and luminaire to facilitate automated Collider assignment and placement of lights.



- To allow mounted objects to be placed and mounted correctly on flat and sloped surfaces, extend the grout or cast-in-place mounting below the pivot by at least 20cm or 8".





Materials

- Materials imported from an FBX file will need to be converted to HDRP Unity materials. To facilitate this conversion and reduce the number total number of materials generated from imported assets, exported materials should be prefixed with “exp_(name of material)”. An importer script can then create a single material and utilize that material to replace all similarly named imported materials.

Object taxonomy

- Imported objects should have their object type encoded within their name (e.g., *TrafficSign_1*), or included as a tag. Basic categories that we would like to identify include:
 - Car
 - Cyclist
 - Motorcyclist
 - Pedestrian
 - TrafficCone
 - Barrier
 - TrafficSign
 - TrafficLight
 - GuardRail
 - Terrain
 - StreetLight
 - Building
 - Vegetation

- StreetFurniture
- Misc /* anything else */