## Manufacturing Protocol

This supplementary face shield consists of three (3) components: the Shield, the Cradle, and an adjustable Elastic Strap. The shield and elastic strap can be purchased off-the-shelf, however, the cradle must be locally manufactured. This protocol assumes the Cradle will be manufactured via 3D printing.

**3D Print Collection Steps**

Each 3D printer, all of the parts that it produces, and each spool of filament used for that printer should only be handled by one person. This is to reduce the risk of transmission via shared surface contact.

1. Prior to printing, obtain a clean bag or box to place finished prints inside. The container must be able to be closed.
2. Take a new, clean piece of paper and write your initials on it, leaving room for several other handlers’ initials. This will be known as the **Handler Tracking Sheet.**
3. Securely tape the Handler Tracking Sheet to the outside of the container.
4. Once a newly printed Cradle has cooled, it should immediately be placed in the container. Do not place any Cradles from another handler’s machine in that same container.
5. When the container is full, close it and prepare a new container.

**3D Printer Settings**

The following settings are recommended when 3D printing the Cradle. This ensures that each print is of a consistent build regardless of printer and allows printing to be distributed across multiple 3D printing partners. All settings not listed should be adjusted according to the specific 3D printer to ensure a structurally sound part. The following settings assume a 0.4mm nozzle.

* Layer height: 0.2mm
* Number of perimeters: 3
* Fill density: 30%
* Fill pattern: Grid
* Top/bottom fill pattern:Rectilinear
* Number of solid top Layers: 5
* Number of solid bottom layers: 4
* No skirt or brim
* No supports

**3D Printing Steps**

Exact printing steps will vary by specific 3D printer used. Follow original manufacturer’s instructions.