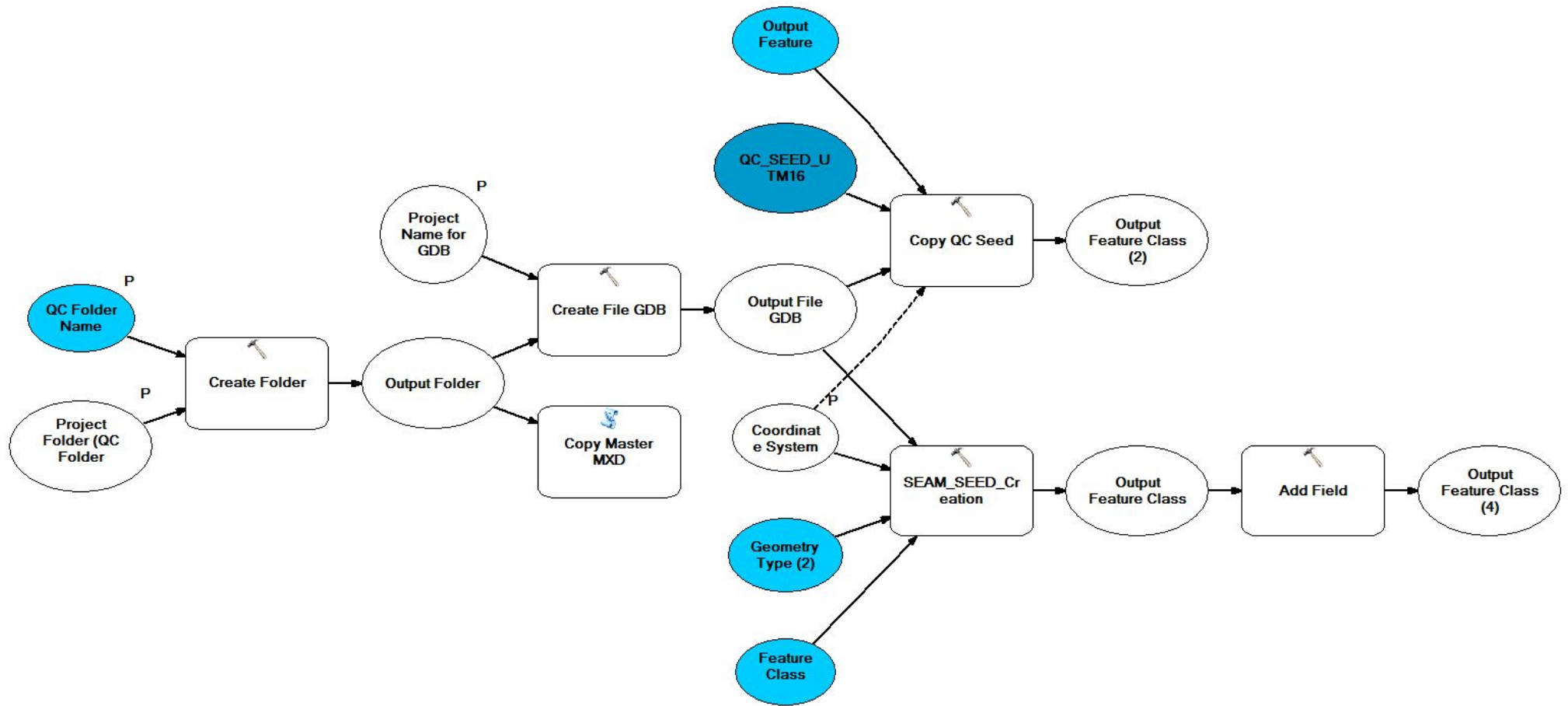
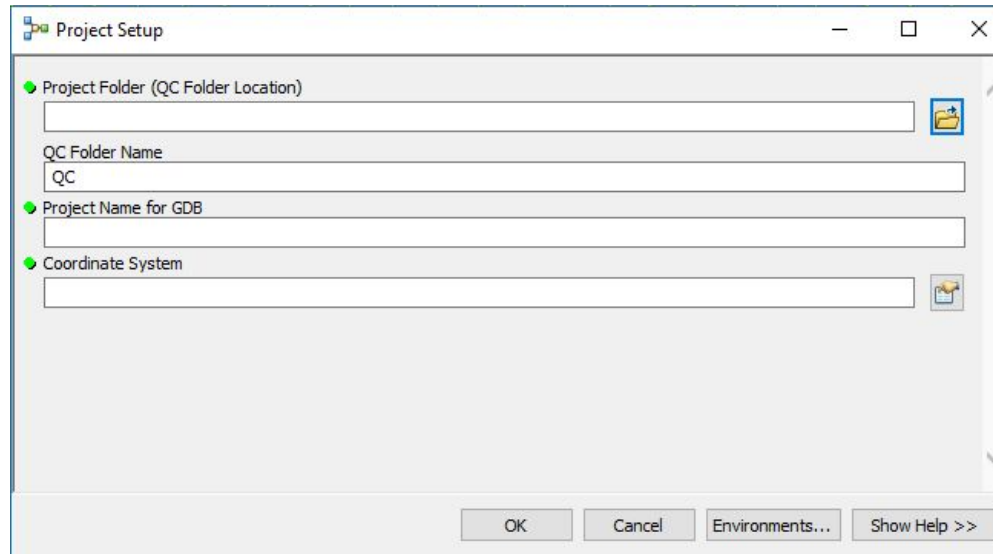


Project Setup

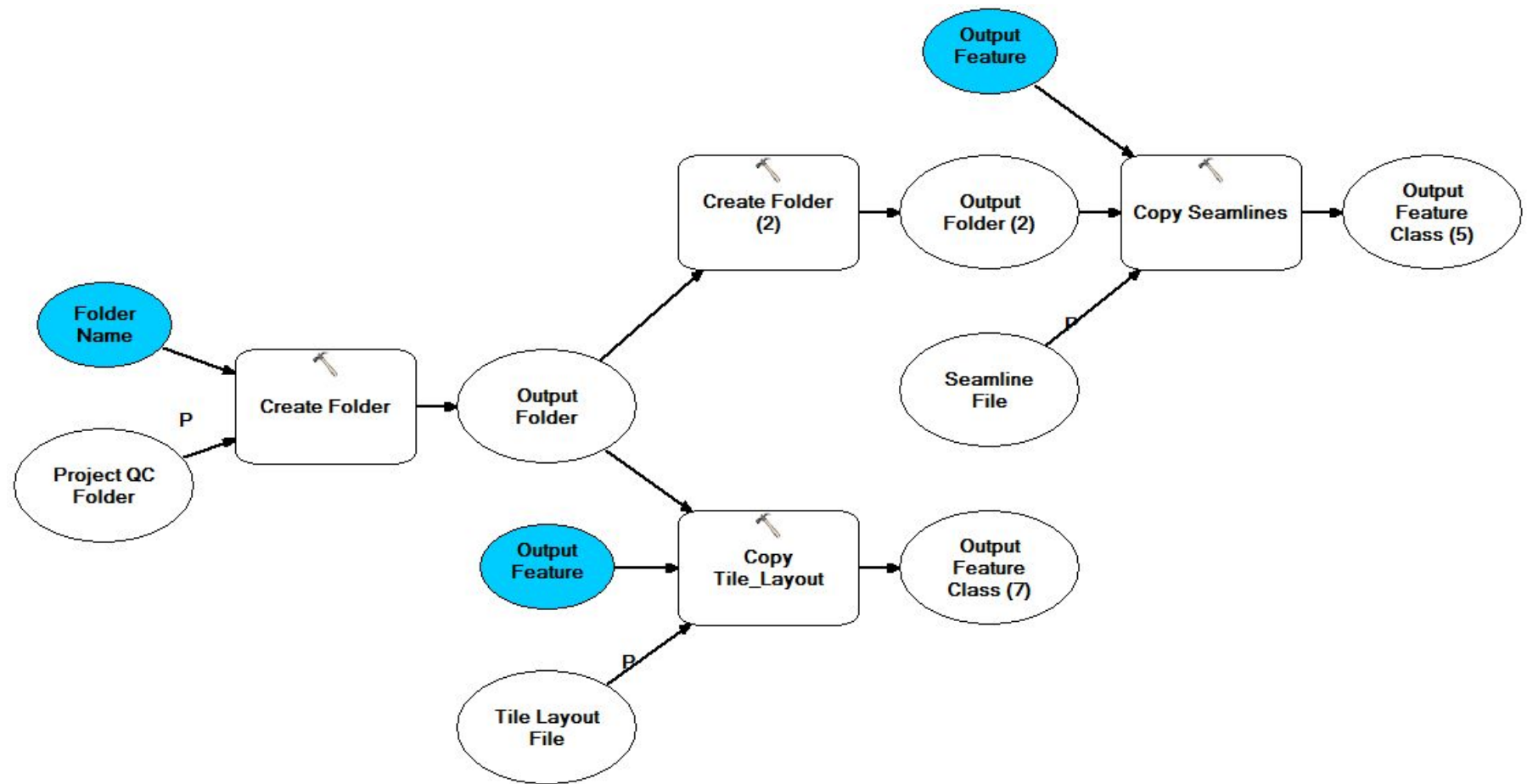


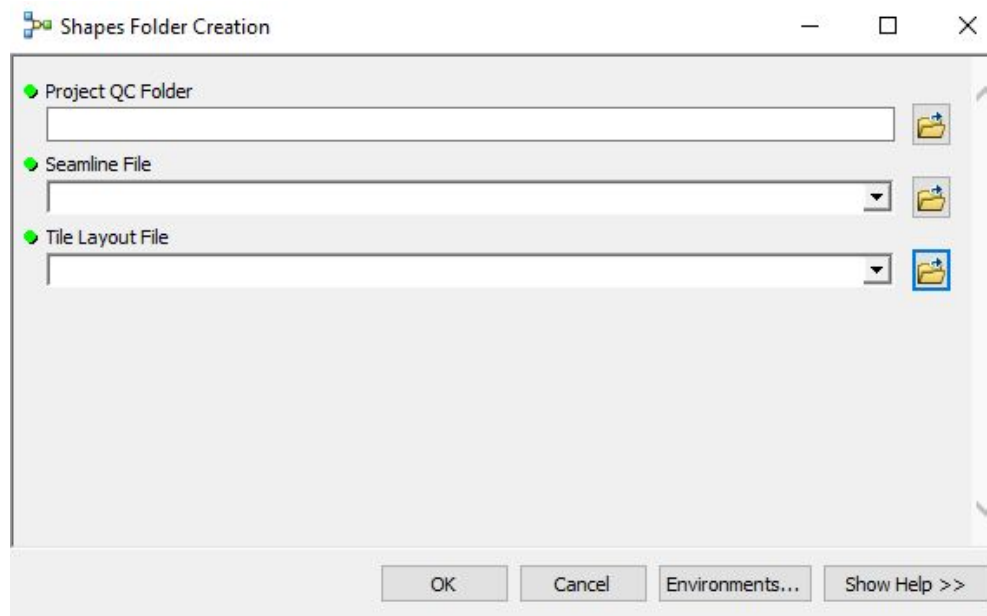


First time setup for QC phase of a project.

- Project Folder - the folder you would like to house the QC folder, ex - P:\Projects\31537_Vermont_Year_3\Ortho ← The model will then create a folder in this directory called “QC” which will be populated with a master MXD and GDB.
- QC Folder - Defaults to “QC” but it can be changed to whatever fits your needs.
- Project Name for GDB - The name of your file geodatabase. Generally the same name as the project.
- Coordinate System - Needed to properly project the “Seam” and “QC” seed feature classes.

Shapes Folder Creation

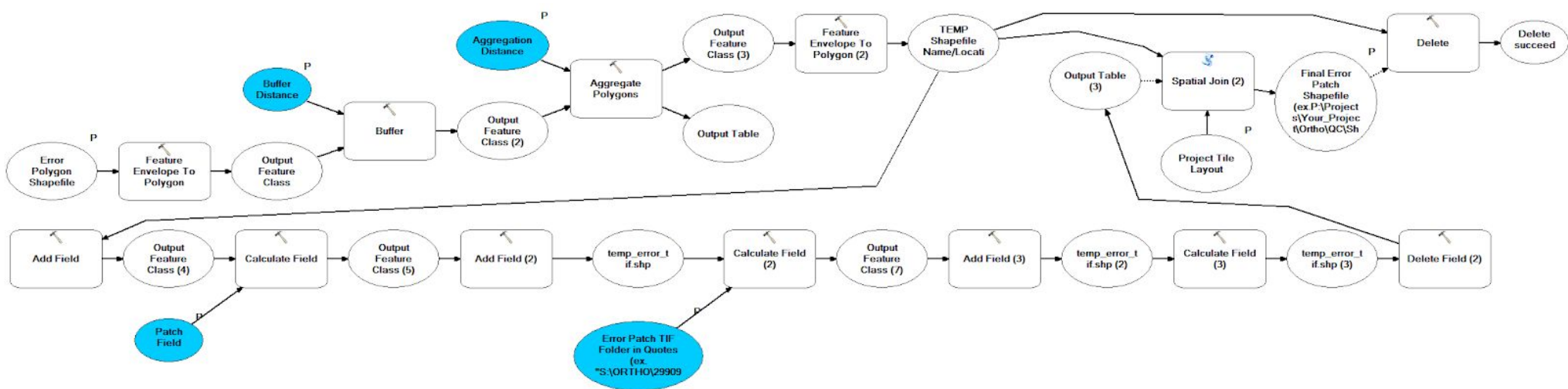




Optional second step of QC project setup. Standardizes seam and tile layout name and location.

- Project QC Folder - the path to the QC folder you created in Project Setup. Model will create a folder in this directory and name it "Shapes"
- Seamline File - The path to your Seamline. Model will copy the seamline file to the new "Shapes" folder and rename the file "Seamlines".
- Tile Layout File - The path to your Tile Layout. Model will copy the tile layout file to the new "Shapes" folder and rename the file "Tile_Layout".

Error Patch Tile Layout Generation



Error Polygon Shapefile
SPC_NC_F_reQC

Project Tile Layout
Tile_Layout

Buffer Distance
☒ Linear unit
 200 Meters
☐ Field

Aggregation Distance
50 Meters

Patch Field Expression (Default: FID)
"NC-F_"&[FID]

Error Patch TIF Folder in Quotes (ex. "S:\\ORTHO\\29909_PEMA\\Bucks\\Error_Patch_TIFs")
"C:\\Users\\sconway\\Desktop\\python_test\\patch_tif"

Final Error Patch Shapefile (ex.P:\\Projects\\Your_Project\\Ortho\\QC\\Shapes\\Error_Patch.shp)
C:\\Users\\sconway\\Desktop\\python_test\\shapes\\Error_Patch.shp

Final Error Patch Shapefile
 (ex.P:\\Projects\\Your_Project\\Ortho\\QC\\Shapes\\Error_

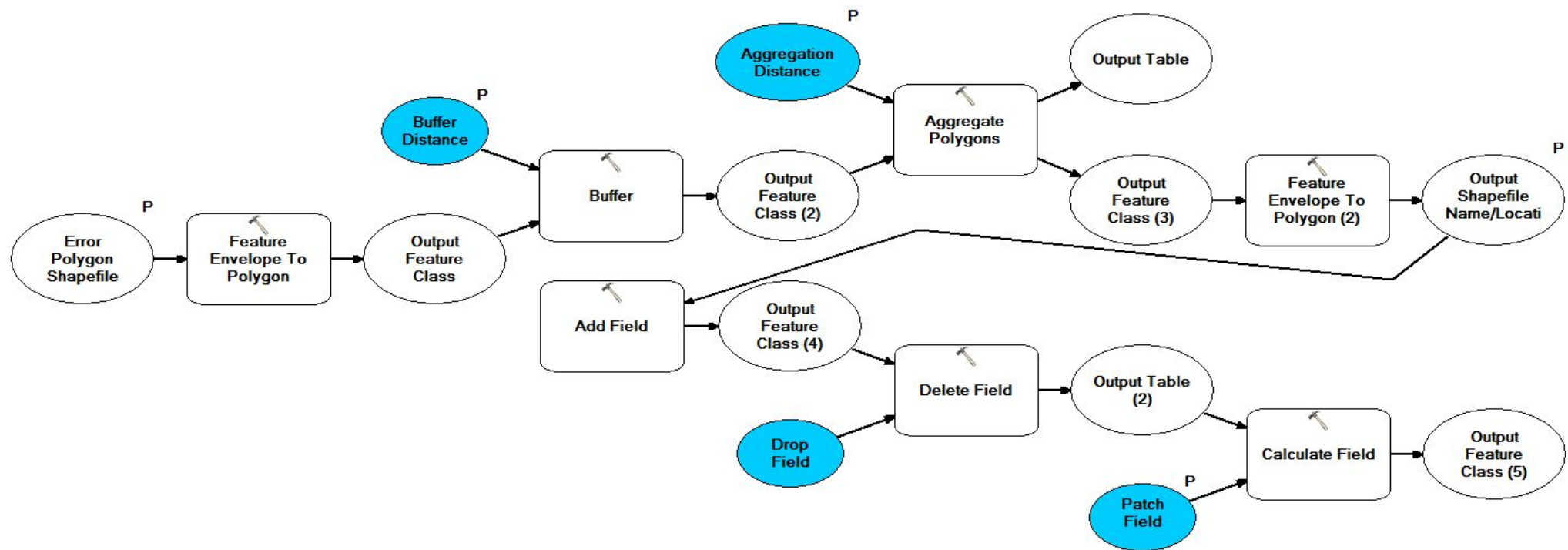
Where you want your error patch tile layout. Generally in the shapes folder of your project. Should be named **Error_Patch.shp**. Ex. **P:\\Projects\\Your_Project\\Ortho\\QC\\Shapes\\Error_Patch.shp**

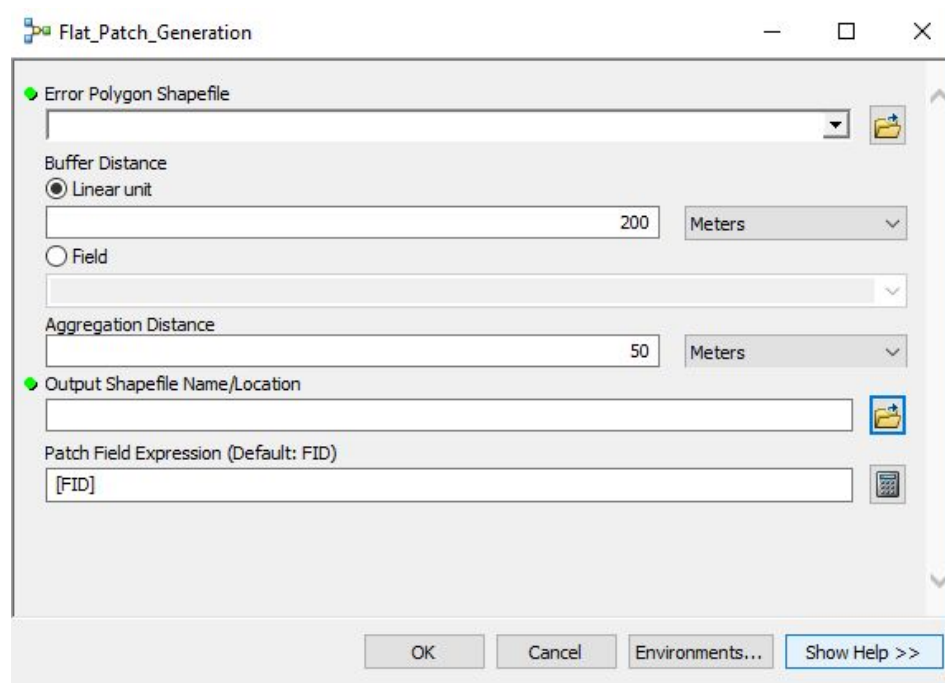
OK Cancel Environments... << Hide Help Tool Help

Creates tile layout for error patch fix phase.

- Error Polygon Shapefile - a shapefile with everything except "tonal" from the master circles of the QC phase.
- Project Tile Layout - The Tile_Layout of your project. Must be made from the TIFs in DataViewer with the **Path** field exported.
- Buffer Distance - distance to buffer the QC circles MBR to be sure we are giving everyone enough room to work.
- Aggregation Distance - radius for model to search and combine nearby circles.
- Patch Field Expression - Defaults to **FID**, but can be prepended or appended with any text. Added text must be in quotes and the **&** symbol used to concatenate. Ex. **"NC-F_"&[FID]**
- Error Patch TIF Folder - The folder that will house your error patch tifs. Must be in quotes. Ex. **"S:\\Ortho\\29909_PEMA\\Bucks\\Error_Patch_TIFs"**
- Final Error Patch Shapefile - Where you want your error patch tile layout. Generally in the shapes folder of your project. Must be named **Error_Patch.shp**. Ex. **P:\\Projects\\Your_Project\\Ortho\\QC\\Shapes\\Error_Patch.shp**

Flat Patch Tile Layout Generation

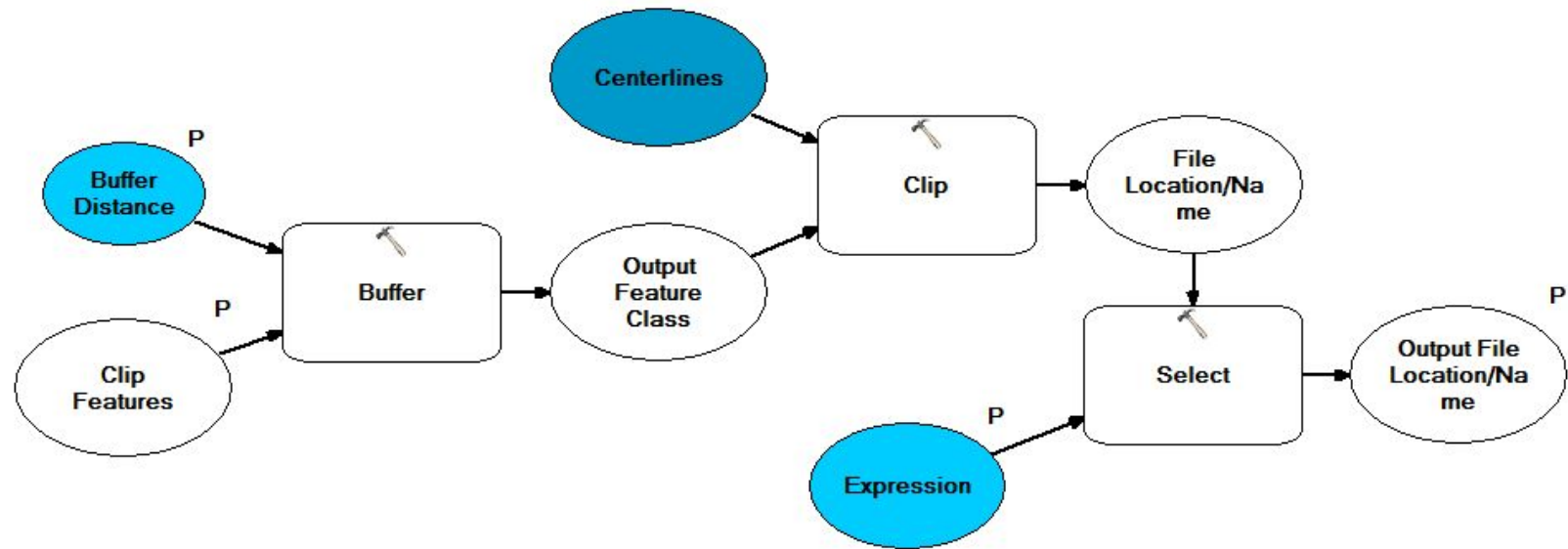


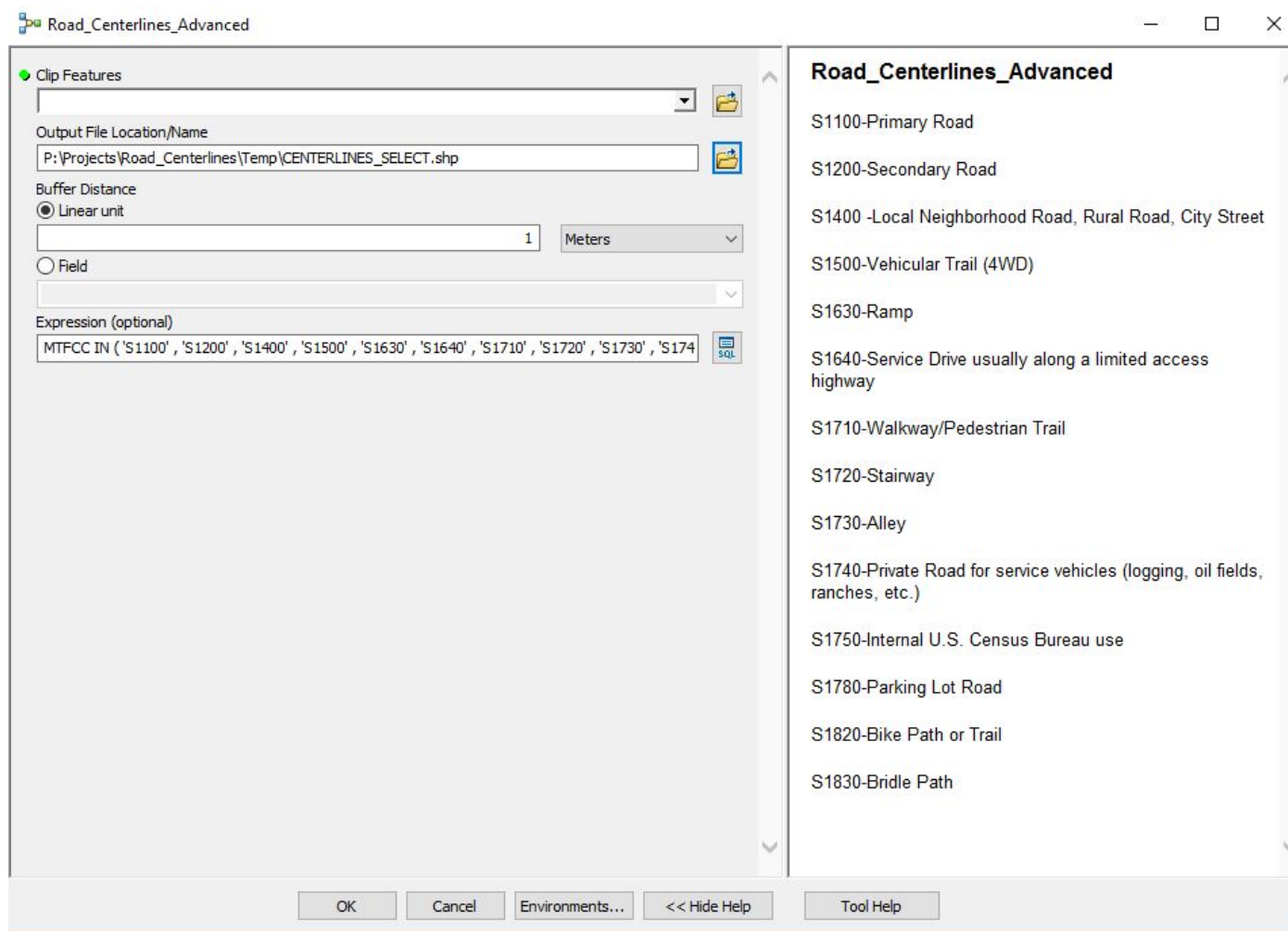
The image shows a software dialog box titled "Flat_Patch_Generation". It contains several input fields and options. At the top, there is a green checkmark icon and the label "Error Polygon Shapefile" above an empty text box with a folder icon to its right. Below this is the "Buffer Distance" section, which has a radio button selected for "Linear unit" and a text box containing the value "200", followed by a "Meters" unit dropdown. There is also an unselected radio button for "Field" with an empty dropdown menu next to it. The "Aggregation Distance" section has a text box with the value "50" and a "Meters" unit dropdown. Below that is the "Output Shapefile Name/Location" section with a text box and a folder icon to its right. The "Patch Field Expression (Default: FID)" section has a text box containing "[FID]" and a calculator icon to its right. At the bottom of the dialog are four buttons: "OK", "Cancel", "Environments...", and "Show Help >>".

Generates a tile layout for flat patch creation.

- Error Polygon Shapefile - a shapefile with only “wavy” and “smears” extracted from the master circles of the QC phase.
- Buffer Distance - distance to buffer the QC circles MBR to be sure we are giving everyone enough room to work.
- Aggregation Distance - radius for model to search and combine nearby circles.
- Output Shapefile Name/Location - What you want the error patch tile layout to be named and where you want it saved.
- Patch Field Expression - you can customize the PID field values. Must be short integer.

Road Centerline - Advanced

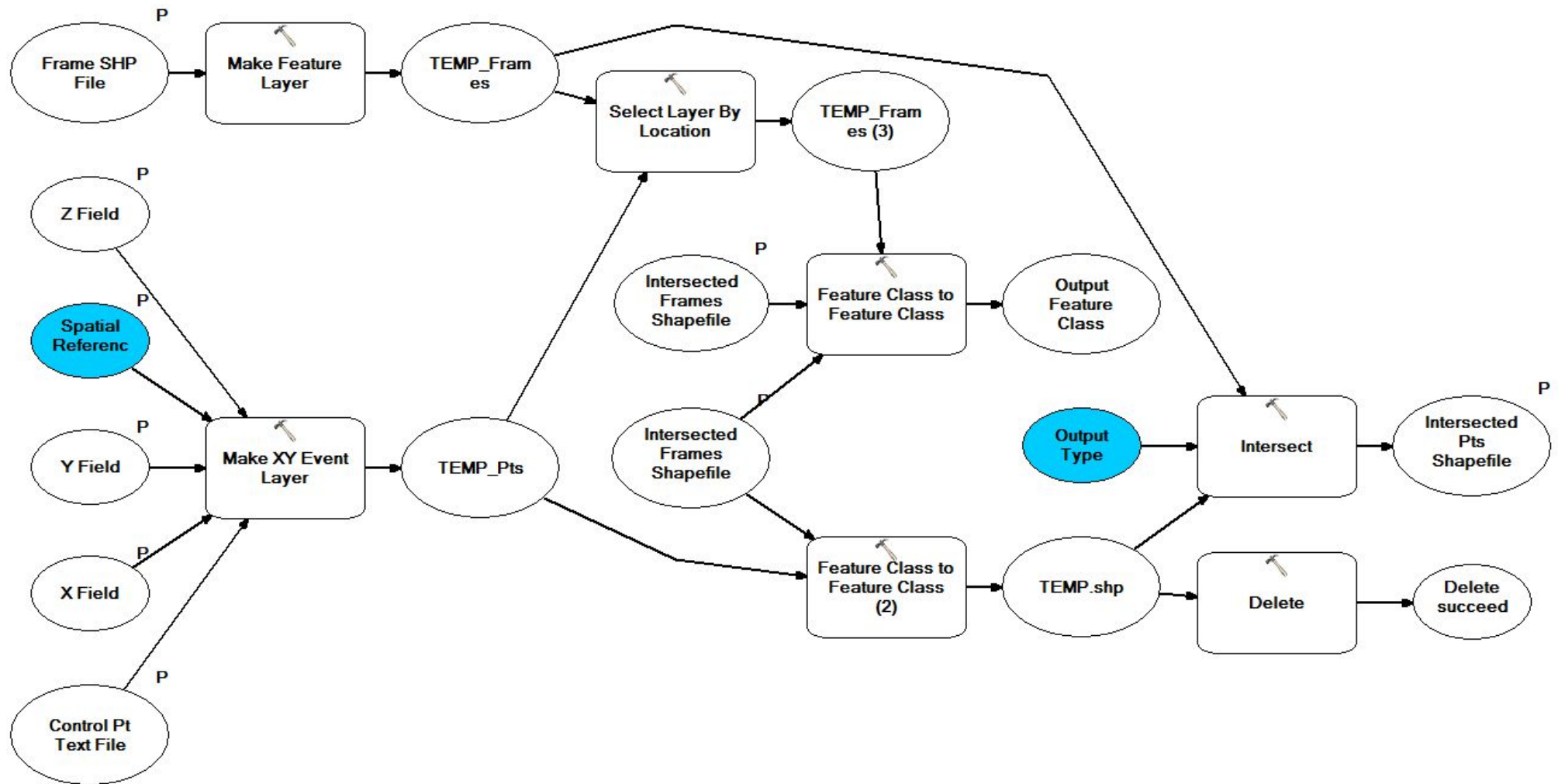


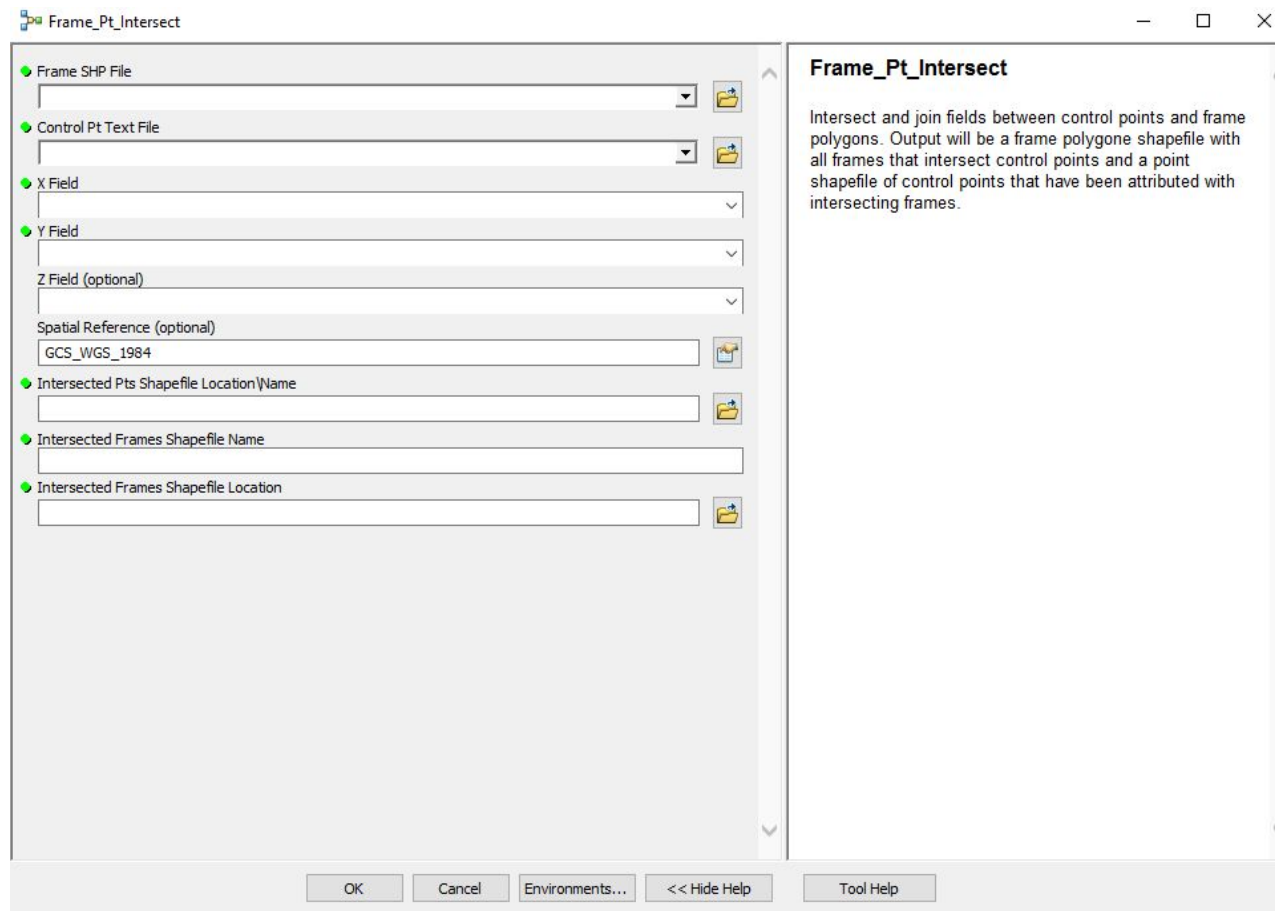


Creates shapefile with the road centerlines from a given AOI.

- Clip Features - AOI to make centerline shapefile to. Tile layout is generally best to use.
- Output File Location/Name - Where you want the shapefile and what it is to be named.
- Buffer Distance - How far past the AOI you would like the shapefile to extend.
- Expression - Default is set to all road types “on”. Any can be removed from the expression. They are listed in the above screenshot and in the Help sidebar of the model.

Frame Point Intersect

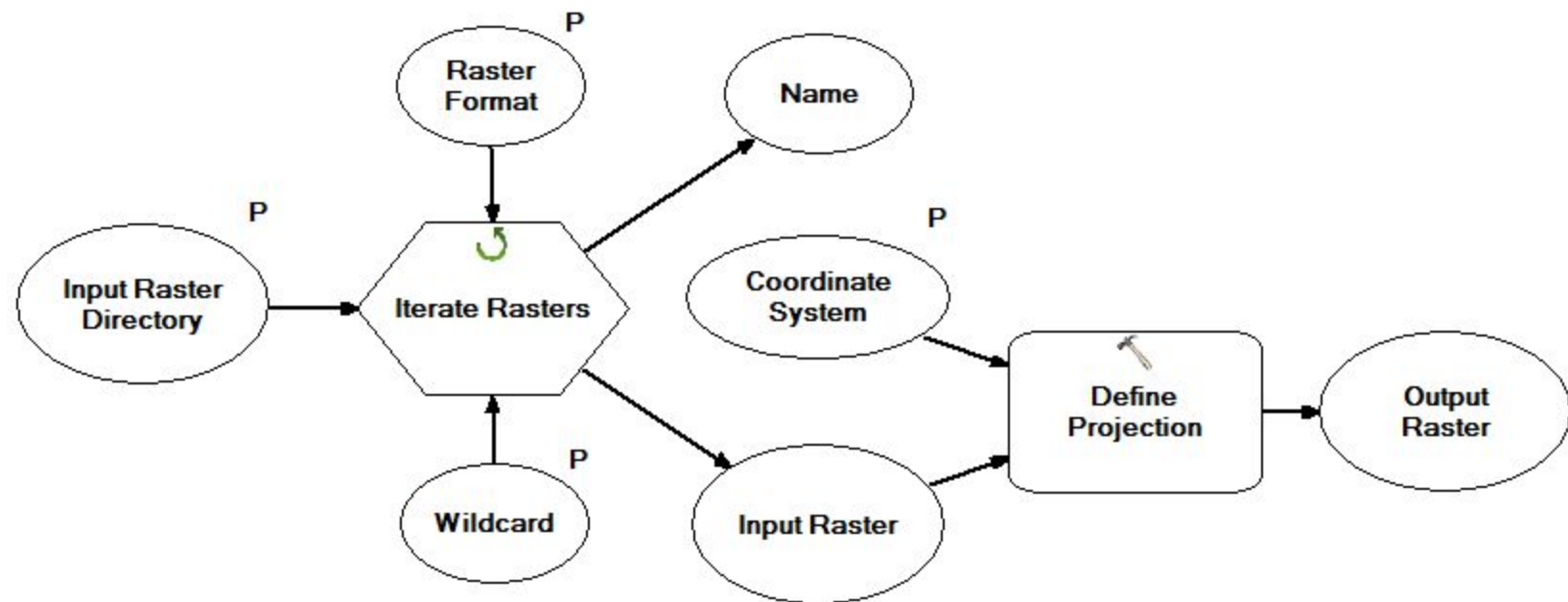


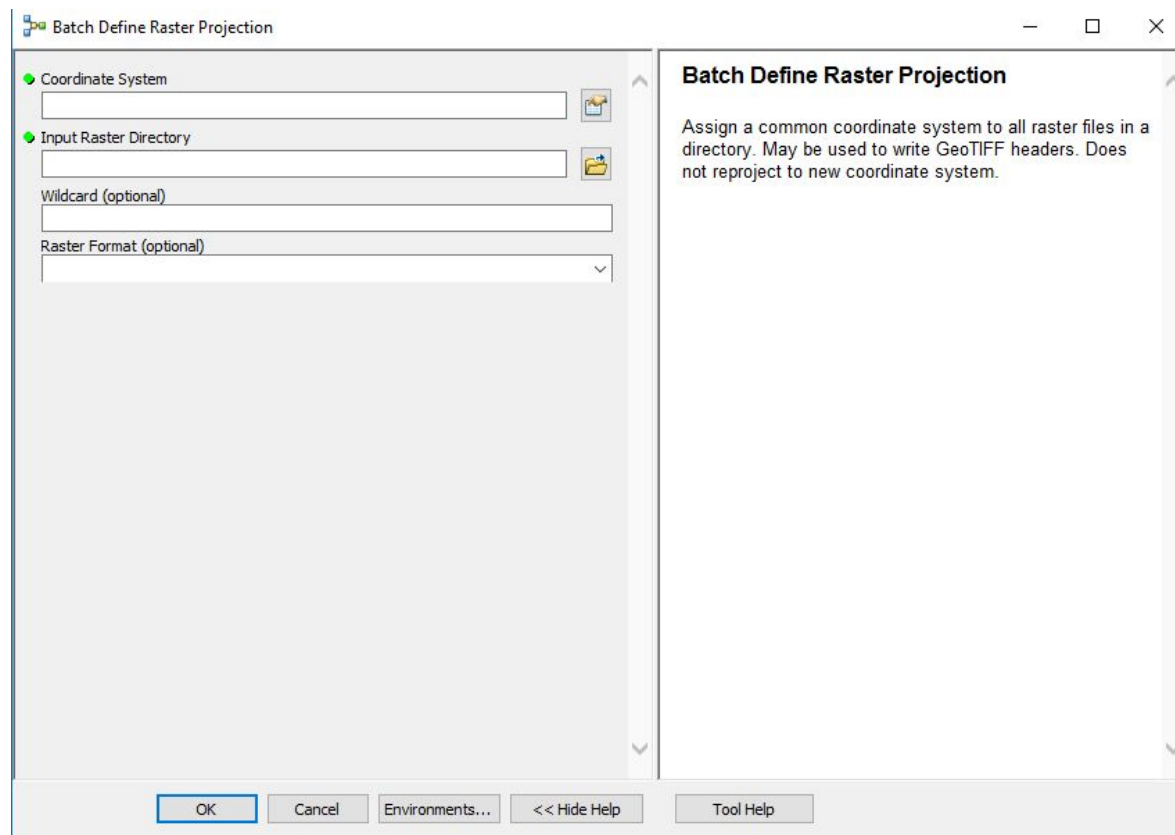


Intersect and join fields between control points and frame polygons. Output will be a frame polygon shapefile with all frames that intersect control points and a point shapefile of control points that have been attributed with intersecting frames. To be used for accuracy measurements.

- Frame SHP File - the footprints of the rectified frames. Should be made in DataViewer with the correct sensor information, not from the MBR of the imagery as the shapefile DV makes will be more accurate to actual shapes and won't return false positives.
 - To get the footprint from DV, first go to **Tools→Change Default Photo Frames Settings** and be sure the proper sensor is selected, then just drag in the FPD (preferably), KML or TXT file. Then export to shapefile.
- Control Pt Text File - list of control points in TXT format.
- X, Y, Z Fields - select the proper fields from the TXT file corresponding to the XYZ fields.
- Spatial Reference - coordinate system the control points TXT file should be projected to.
- Intersected Pts Shapefile Location\Name - name and location to save the control points shapefile.
- Intersected Frame Shapefile Name - name for new frame shapefile with just the frames that intersect control points.
- Intersected Frame Shapefile Location - location for new frame shapefile with just the frames that intersect control points.

Batch Define Raster Projection





Assign a common coordinate system to all raster files in a directory. May be used to write GeoTIFF headers. Does not reproject to new coordinate system.

- Coordinate System - the CS a rasters header should read as.
- Input Raster Directory - directory containing rasters.
- Wildcard - use wildcard in the form of *.tif to select only those file types to be assigned projection information.
- Raster Format - select the format of the rasters to be operated on.

ArcMap QSI Ortho Toolbar



Toggles seamline and tile layout layers on and off.

Toggles rasters that are on, off - and rasters that are off, on. Useful for seaming.

Changes band setup for all rasters to RGB.

Changes band setup for all rasters to CIR.

Changes band setup for all rasters to grayscale NIR.

Makes any black (void data) areas of a raster transparent.

Makes and white (void data) areas of a raster transparent.

Opens a selected tile in Photoshop.

Imports tiles that have been checked out in the timer into ArcMap.

ArcMap QSI Ortho Error Patch Toolbar



User selects tile, and this button will load all error patches contained in that tile.

Imports only the error patches associated with the tiles checked out in the timer.