

# DRONE U MAPPING WORKFLOW

## GENERAL MAPPING INSTRUCTIONS

### ACQUISITION

- **Survey Location Site**
  - Determine size of area
  - Airspace / Weather
  - Determine acquisition strategy
  - Determine Deliverable
- **Lay Out GCP's**
  - Ensure Equal distribution throughout the project, no more than 500' between GCPs
  - Lay out 5 GCP's Add 2 checkpoints
  - Use GCP targets (Like Drone U GCP Landing Pad)
  - Pull GPS Points with D-GPS Equipment over each GCP Target
- **Find MOCA of area**
  - What is the minimum obstacle clearance altitude to ensure clearance and at least 25' separation from obstacles
- **FLY MISSION: Pilot should use acquisition application to map area with Drone**
  - Fly Double Grid, Nadir Single Grid with Orbitals And Free Flight Data if Necessary
  - Ensure Image Overlap, White Balance
  - Survey Grad Overlap: 75 / 75%
  - Minimum Overlap: 60% side and 75% Front
  - Thermography Overlap: 80 / 85%
  - Corridor Mapping Overlap 85 / 60%
- **Validate Export data**
  - Check for blurred images
  - Geo Tags are correct
  - All images taken properly

### PROCESSING

- **Process Imagery with PIX4D**
  - Create a new Project
  - Add a processing area in the map view (only if you have geotags)
  - Process Step 1
  - Import GCP coordinates
  - Project > GCP/MTP Manager > import GCPs
  - Mark All GCP's in 8-10 Images in rounded format
  - ReOptimize Click Process -> reoptimize
  - Check Reprojection error for each GCP in quality report to ensure below
  - Process Step 2
  - Edit Point Cloud and clean up, then process 3d textured Mesh after point cloud clean up is completed
  - Process Step 3
  - Delivery to Client Via Google Drive or Dropbox or something else. Or Export Google Tiles (KML)
  - Delivery 3d Textured Mesh to SketchFab for Client Delivery
  - Import Model
  - 3d Settings
  - Click sharpness
  - Click Shadeless
  - Add a background
  - Choose opening view
  - Publish
  - Send to client