

Survey Request

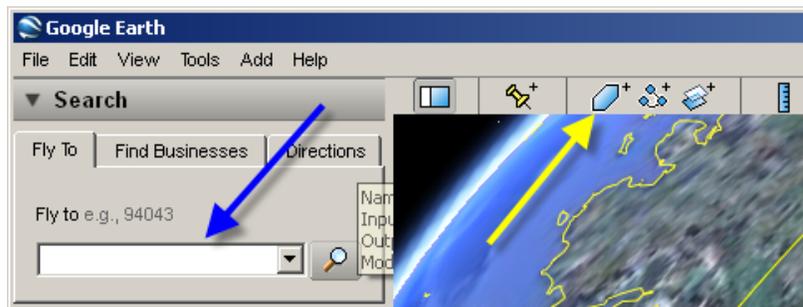
A Survey Request is accomplished in two main steps.

Step 1, Graphically defining and Printing the Survey Request Area

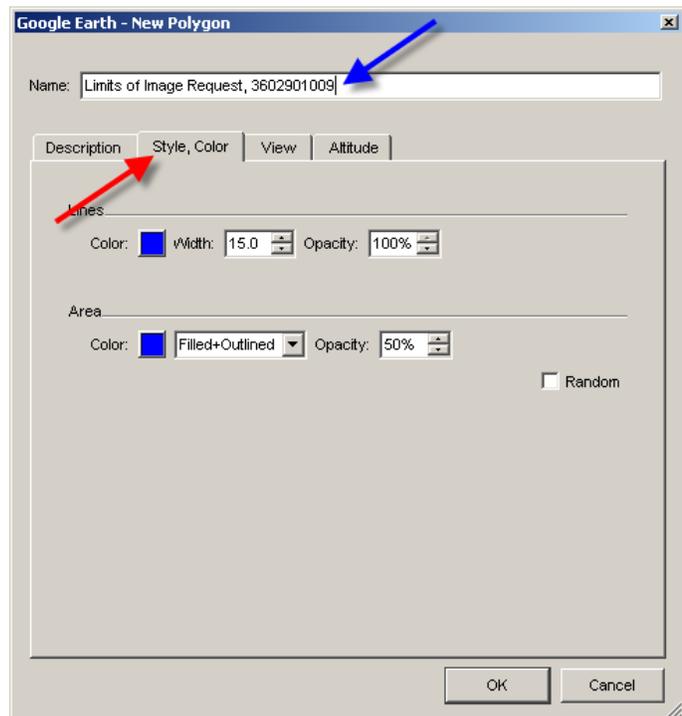
A request should be sent to the Photogrammetry section for the imagery that covers the project area. It is important that the request is for a large enough area to adequately encompass any potential survey needs. The effort required to add additional images is the same as for the initial request.

NOTE: Prior to submitting a survey request, check with other offices to see if your request area is large enough to capture any additional survey needs they may be anticipating.

Start the Google Earth program, and enter the location of your project in the “Fly to ...” field, (located by the blue arrow shown at the right). After the general area of interest is displayed on the screen, zoom in or out to make sure the specific area needed is displayed.



To show the outline of the specific area of the survey request, *click* the **Place Polygon** icon, (located by the yellow arrow, above), and the “Google Earth – New Polygon” dialog will display, as shown at the right.



Enter a “Name” for the polygon, such as the “Limits of Image Request (Project#)”, similar to as shown by the blue arrow at the right.

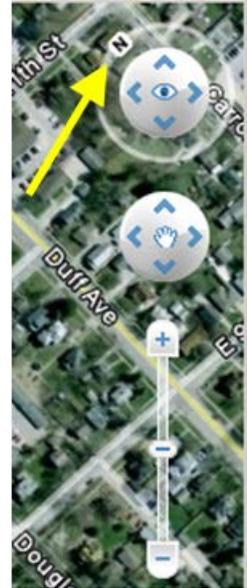
Select the “Style, Color” tab, (as located by the red arrow), and change the settings to match those shown.

Do NOT click the **OK** button until after the shape has been placed.

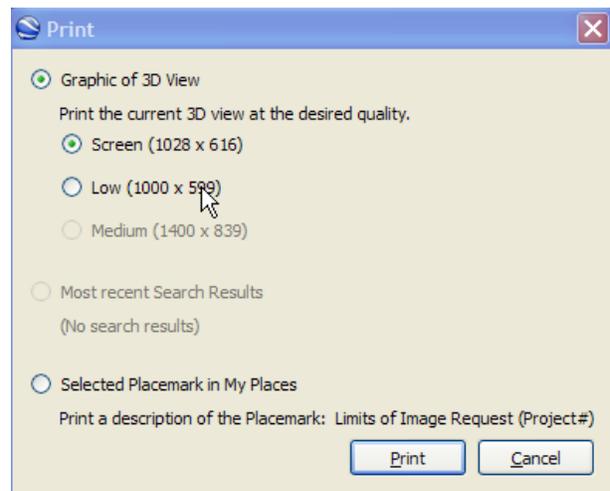
(See the next sheet for the polygon shape placement instructions.)

NOTE: The “Rotate, Move, Zoom in and Zoom Out” tools, (shown at the right), are located at the upper right corner of the image. If they are not visible, move the cursor to that area of the screen and they should appear, similar to as shown.

Before printing, it is important to correct any rotation manipulation of the Google Earth image so that North is at the top. To do this, *left-click* on the small “N” located in the direction indicator, (shown by the yellow arrow at the right). This will cause the image orientation to be corrected and rotated automatically, so that North will be at the top.

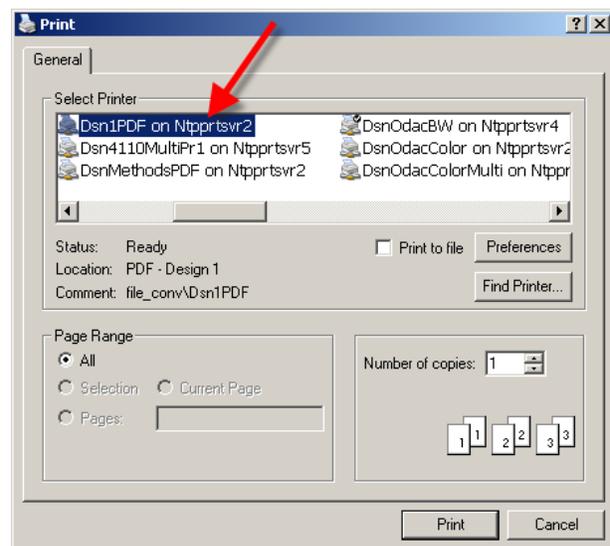


In Google Earth, the *File > Print* command will produce the Print dialog, shown at the right.



When the **Print** button, (shown at the right), is clicked, the **Print dialog**, (shown below), is displayed.

The preferred method of printing in the Office of Design is to send the print to the PDF queue for the specific work-group. The example at the right shows the PDF queue selected for the Dsn1 work-group.



After the “Imagery Request PDF file” has been created, the Imagery Request can be submitted to Photogrammetry by email, with a link to the PDF file.

To place the polygon that will visually define the Survey Request Area, place points, (left-click), to define the area, as shown at the right. The shape will not begin to display until at least three points have been placed, and will continue to change shape as long as additional points are being placed. When the polygon shape placement is complete, *click* the **OK** button, (shown above), to accept the shape.

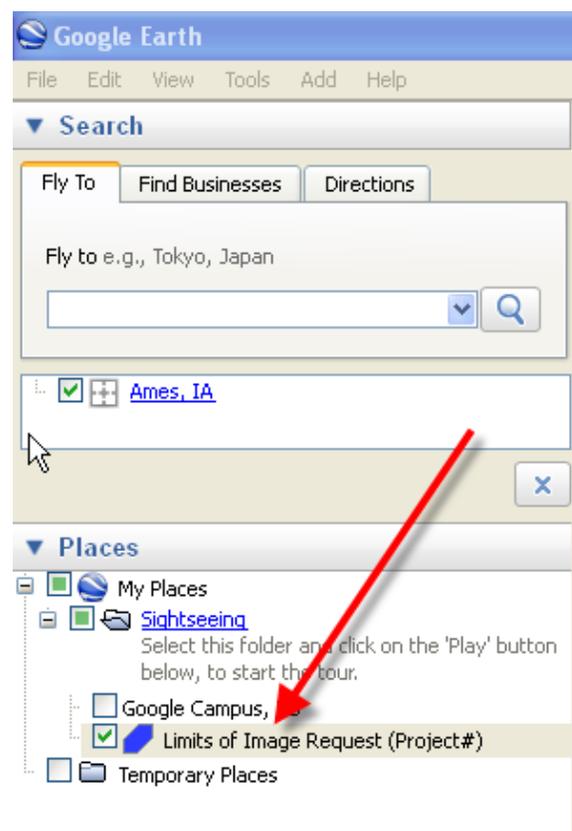


NOTE: This shape is defining only an approximate area of survey need. If there is any doubt on the size of the shape needed, make it larger. This shape is used to obtain the correct aerial imagery files that will be used to create the detailed survey request layout.

After you have placed the shape and *clicked* the **OK** button, the “**Google Earth - New Polygon**” dialog will disappear.

The **Name** of the newly defined polygon should now display in the list under the “**Google Earth > Places**” tab, as shown by the arrow at the right.

If a different shape is needed, highlight the name of the existing shape in the **Places** list and delete it, using the keyboard delete key. Recreate a new shape, as described above.



The **Roads Layer** must be toggled ON, () as shown at the right), so the Street and Highway names will be displayed on the printed Survey Request.



Step 2, Lay-out the detailed Survey Request in MicroStation:

After receiving notification from Photogrammetry that the imagery is available, the file should be located in the project Photo folder, with a “.ras” (raster) file extension.

A new 2D file should be created using the 2D seed-file in the Copy Seed program. For details on the Copy Seed program, see section [21C-54](#).

In the new 2D file, attach the “.ras” imagery file as a reference file.

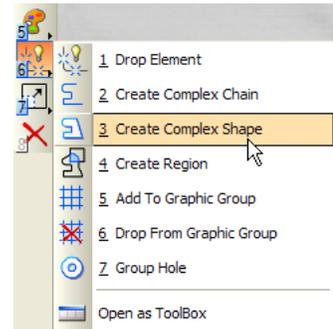
It is important that the survey request shape(s) placed in this file include all necessary areas, but none that are not needed. The survey process is very time consuming and expensive. It can easily take from six months to one year to get additional survey completed. It is necessary to make effective use of the surveyor’s time. The “ground survey” process typically picks up the following items:

The intervals are adjusted at the Surveyor’s discretion	
Feature	Approximate interval for shots
Centerline	50 feet
Edge of Pavement	50 feet
Edge Returns	2 to 20 feet, depending on grade changes
Draws and other Breaklines	As needed by topography
Culverts or other drainage structure	Any that fall within the limits of the request
Side Roads	Only the amount included in the request

If other key items are needed, this should be addressed in the survey request.

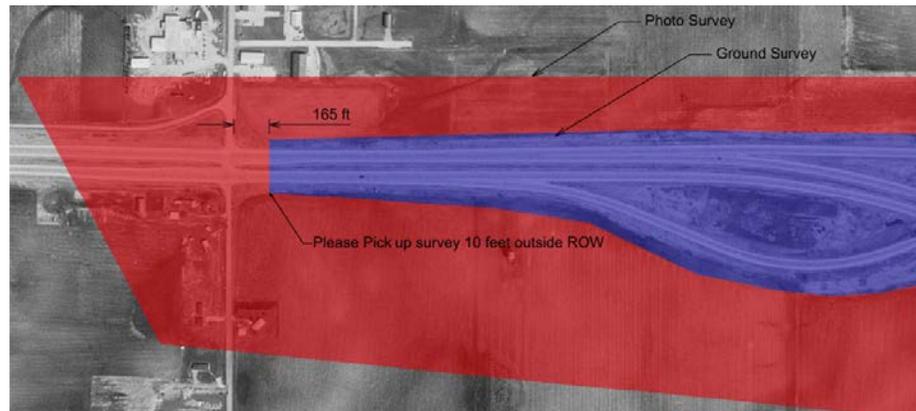
Two shapes should be placed in the file. One that defines the limits of the field survey (blue, at 50% transparency) and one that defines the limits of the Photogrammetric survey (red, at 50% transparency).

The shape(s) placed should be complex MicroStation shape(s). If individual lines were used to define the boundary, the “create complex shape” tool, (as shown at the right), should be used to convert the individual lines into a single complex shape.



The field survey request should be dimensioned, as much as possible, to make it easier for the field personal to determine where to start and stop the survey. After the shape(s) are complete, an e-mail should be sent to the Photogrammetry section and Preliminary Survey section with a link to the file containing the defined survey limits.

The model from this file will be copied into either the appropriate Photo or Preliminary Survey file(s). The date of the Survey Request will be saved within the model name. As additional survey requests are made, additional dated models will be added.



Chronology of Changes to Design Manual Section:

020A-002 Survey Request

7/18/2013 Revised
Minor technical edit in table on page 4.

2/26/2010 NEW