

Map Separates

U.S. Geological Survey (USGS) topographic maps are printed using up to six colors (black, blue, green, red, brown, and purple). To prepare your own maps or artwork based on maps, you can order separate black-and-white film positives or negatives for any color printed on a USGS topographic map, or for one or more of the groups of related features printed in the same color on the map (such as drainage and drainage names from the blue plate.)

In this document, examples are shown with appropriate ink color to illustrate the various separates. When purchased, separates are black-and-white film negatives or positives.

After you receive a film separate or composite from the USGS, you can crop, enlarge or reduce, and edit to add or remove details to suit your special needs.

For example, you can adapt the separates for making regional and local planning maps or for doing many kinds of studies or promotions by using the features you select and then printing them in colors of your choice.

Color separates

It is possible to order a separate, full-scale film negative or positive that shows in black and white all the features printed in a given color on a particular map.

For example, USGS standard 7.5-minute topographic maps are printed using these colors:

Black for cultural features, boundaries, and names.

Blue for water features.

Red for highway classifications, built-up areas, fence lines, and U.S. Public Land Survey lines.

Green for areas of woodland, scrub, orchards, and vineyards.
Brown for topographic features, including contour lines.

Purple for photorevised data, not field checked, consisting of a variety of added features.

Two different colors are used for a few features. For example, on 1:24,000-scale maps, primary roads have black casing with red fill; secondary roads have black casing without fill.

Color feature separates

Color feature separates are available for most USGS topographic maps.

In the feature-separation approach, the major features to be printed in each color are divided into groups before they are combined to form a master color plate for printing, making it possible for a map user to prepare maps and omit extraneous information.

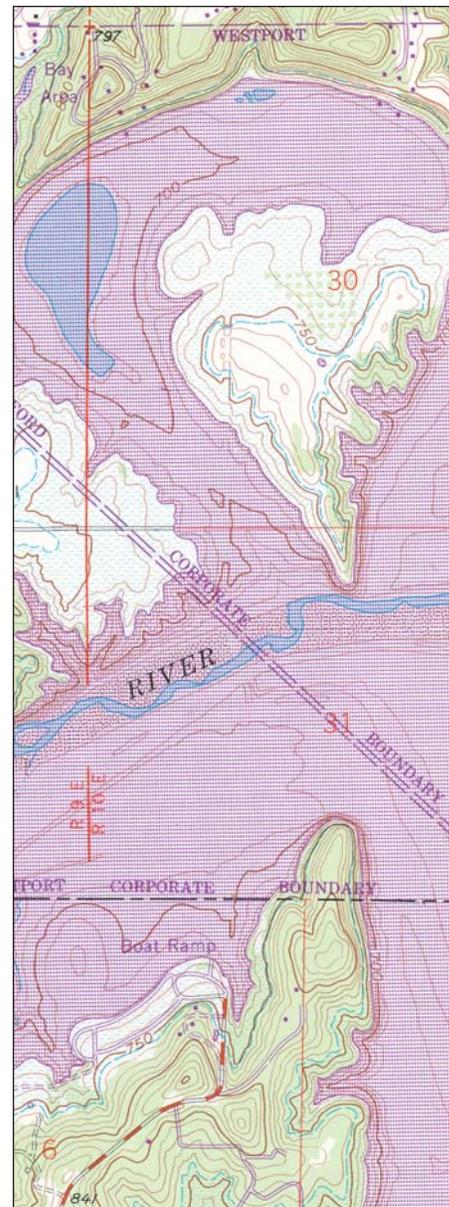
For example, USGS standard 1:100,000-scale maps are printed using these colors, each color having one or several of these features on individual plates:

Black: Side panel, lettering (culture, margin), projection (State grid ticks), miscellaneous culture, civil boundaries, primary and supplementary bathymetric contours, urban tint, UTM grid lines, roads (classes 1 to 5).

Blue: Side panel, drainage, lettering, open water, marsh/swamp, mangrove, intermittent water, inundated, supplemental and index contour lines (bathymetric).

Green: Side panel, woodland tint, orchard, vineyard, scrub.

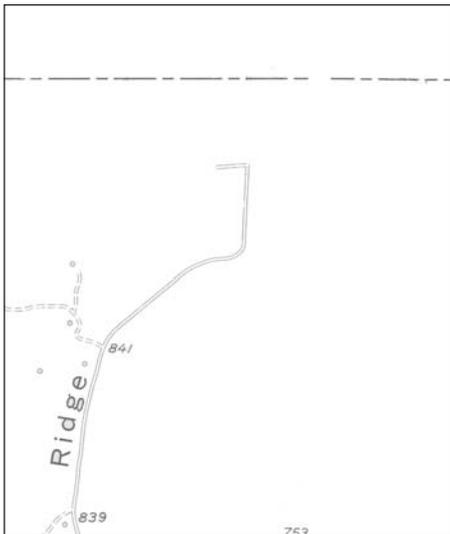
Red: Side panel, lettering (road shields), roads (classes 1 and 2), land lines (Public Land Survey System).



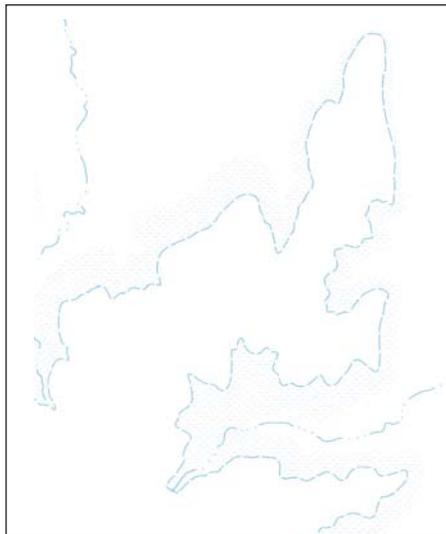
Keystone Dam Quadrangle, Oklahoma, 7.5-minute series.

Brown: Side panel, lettering (contour line numbers), contour lines, supplemental contour lines, sand, intricate surface (that is, landfills, mining, and so on).

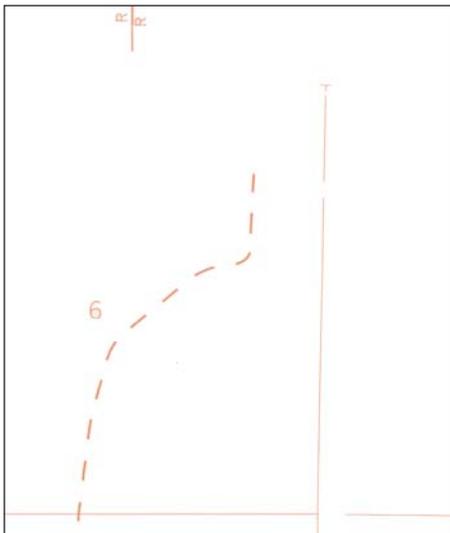
Some features are printed in more than one color.



Black color separate showing cultural features, boundaries, and names.



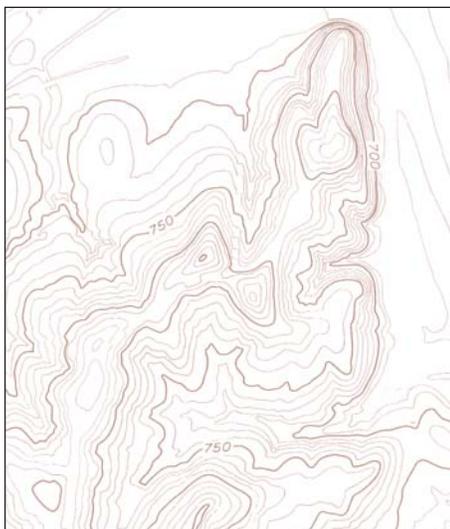
Blue color separate showing water features.



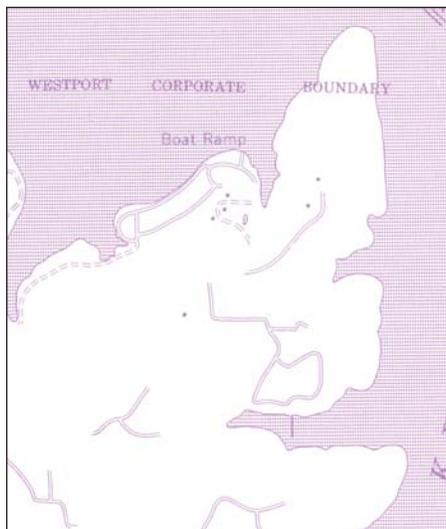
Red color separate showing highway classifications, built-up areas, and U.S. Public Land Survey lines.



Green color separate showing areas of woodland.



Brown color separate of topographic features, showing contour lines.



Purple color separate showing photorevised data, not field checked, consisting of a variety of added features.

You can order film materials of any available feature separate or a composite of two or more feature separates.

Ordering options and terms used on the order forms

- Feature separate—film negative or positive for selected types of data in the map preparation process.
- Color separate—film negative or positive for each color required in the printing process. (Usually includes several related feature separates.)
- Composite—the combination of any number of color or feature separates on a single piece of film.
- Film thickness--0.007" (0.1778 mm). 0.007 film is a good stable base material for uses requiring accurate registration of separates or composites and is also appropriate for masters used to produce diazo paper or film copies.
- Left reading or right reading is based on viewing the film material with emulsion toward the reader. Right reading means that the image is readable from left to right. Left reading means that the image is "unreadable" because it is a mirror image.

Some examples are listed below:

- Left-reading positive—used for diazo copying.
- Left-reading negative—used as the standard product for press plates and paper printing. Since the emulsion contacts the reproduction medium, it avoids any distortion caused by exposing through the thickness of the film.
- Right-reading negative—used to produce duplicate negatives for special accuracy requirements.
- Right-reading positive—used to add features by ink or drawing pens and to overlay (stack) features as the base for making negatives.
- Matte or frosted positive—used as a base to add features by inking; a good writing surface. It is also used for stick-up materials, such as names and symbols on transparent tape.

- Green or blue line positive—a matte film with the base (background) printed in green or blue so that additions could be added in ink. The background can be photographically "washed out" by camera copy to produce a separate of the added features only.

- Open window—the open area on a negative on which a screen or pattern may be placed to indicate features such as water, woodlands, or scrub. In many cases, map separation materials can be requested without the open window separation.

- Standard screen—the rating of the tone produced by tint screens is designated in percentage of ink coverage; therefore, a 10-percent screen will produce a very light tone, and an 80-percent screen will give a very dark tone.

A word of caution: This fact sheet and the map separates and composites order forms give general information. Some map separate materials may not be available. We recommend contacting an Earth Science Information Center (ESIC) to discuss your specific needs before ordering.

How to order color separates or color feature separates

1. Obtain the map name, series, and scale from a map index. Currently published USGS topographic maps are listed in the *Index to Topographic and Other Map Coverage*. Each index covers at least one State.

2. Order and examine the paper copy of the map to help in selecting the specific color or feature separates you desire.

3. Complete a Map Separates Order Form for:

- 1:20,000-, 1:24,000-, 1:25,000-, 1:62,500-, and 1:63,360-scale maps
- 1:100,000-scale maps
- 1:500,000-scale maps
- 1:250,000-scale maps

Feature separations for other map series, such as State base maps, National Atlas maps, and United States maps, use different color schemes. Check with an

ESIC for the exact inventory of feature separates for each map ordered.

Order forms and topographic and other maps of the United States published or distributed by the USGS can be obtained from any ESIC office or by calling 1-888-ASK-USGS.

Information

For information on these and other USGS products and services, call 1-888-ASK-USGS, use the Ask.USGS fax service, which is available 24 hours a day at 703-648-4888, or visit the general interest publications Web site on mapping, geography, and related topics at mac.usgs.gov/mac/isb/pubs/pubslists/index.html.

For additional information, visit the ask.usgs.gov Web site or the USGS home page at www.usgs.gov.