



Soil  
Conservation  
Service

United States  
Department of  
Agriculture

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National

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Map Symbol

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Handbook

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Title 170

Part 601

# PART 601 - MAP SYMBOLS

## SUBPART A - GENERAL

### § 601.0 PURPOSE

The map symbols contained in this booklet are designed primarily for use by the Soil Conservation Service. They follow the map symbols most commonly used by U.S. Government agencies. Some symbols were simplified so SCS personnel can draw them more easily, and some were modified to fit special features. The size of the symbols shown is appropriate for conservation plans, soil survey field sheets, soil maps for publication, and certain smaller scale maps. **On other maps, the symbols should be drawn larger or smaller consistent with the map scale.**

### § 601.1 Policy

Not every feature need be shown on a map even though a symbol for it is included in this guide. Good judgment will determine when it is necessary to identify features. A distinction between symbols for existing and planned conservation practices is not necessary unless established procedures require this distinction.











Colored symbols have been used in this booklet to represent some features. In general, the **use of color for map symbols is limited to the following:**

- (1) one or two hand-drawn copies of maps when colored symbols will add materially to the legibility of the map, and
- (2) thematic maps (such as watersheds, river basins, important farmlands) and other maps that are printed by the lithographic process.

# PART 601 - MAP SYMBOLS

## SUBPART B - NATIONAL COOPERATIVE SOIL SURVEY

### § 601.10 Specifications for cultural and drainage overlay.






		LINE WEIGHTS
(Soil map features to be scribed)		SCRIBED LINE IN INCHES
BOUNDARIES		
	NATIONAL, STATE, OR PROVINCE One long dash 1.0", two short dashes .10", spaces .10"	.020
	COUNTY OR PARISH One long dash .75", one short dash .10", spaces .10"	.020
	LIMIT OF SOIL SURVEY (label on type positive overlay) Solid line	.012
	MINOR CIVIL DIVISION Dashed line .20", spaces .10"	.012
	RESERVATION (NATIONAL FOREST OR PARK, STATE FOREST OR PARK, AND LARGE AIRPORT) Dash and one dot. Dash .50" in length, one dot centered in .12" space between dashes. Use symbol for national and international airports larger than a square mile area.	.010
	LAND GRANT Long dash and two short dashes. Long dash .50" in length, two short dashes .040", spaces between dashes .040"	.010
	AD HOC BOUNDARY (SMALL AIRPORT, AIR FIELD, PARK, FLOOD POOL, OIL FIELD OR CEMETERY). (label on type positive overlay) Dash line, .08" dash, .03" space. For small cemeteries add conventional cemetery cross with boundary. Cross bar length approximately equals 1/2 length of stem. Place cross bar 1/4 down from top of stem.	.006
		
	LAND DIVISION CORNERS (sections and land grants) Cross with equal length vertical and horizontal lines, .20" in length overall. Corner stems are aligned with section line and offsets as occur.	.006
	Previously published survey boundary. .50" dash with .175" space.	.008

# PART 601 - MAP SYMBOLS






## § 601.10 Specifications for cultural and drainage overlay (cont.)

LINE WEIGHTS  
SCRIBED LINE  
IN INCHES

### ROADS AND RAILROADS

	DIVIDED (MEDIAN SHOWN IF SCALE PERMITS) ROAD DIVIDED-Both lines solid following alignment of photographic base image.	.025
	DUAL-(MULTI-LANE, NARROW OR /NO MEDIAN)-(Label on type positive overlay) Solid line.	.025
	OTHER ROADS GOOD MOTOR, DIVIDED (NARROW MEDIAN) OR POOR Single line following alignment of image	.025
	TRAIL Dashed line, dashes .15" in length, space between dashes .04	.008
	RAILROAD SINGLE AND MULTIPLE TRACK-Solid line with crossties .50" apart, .06" long.	.008

### DRAINAGE

	STREAM, SINGLE-LINE PERENNIAL-Long dash and one short dash (dot). Long dashes .50" in length with one short dash (dot) .030", spaces .030"	.006
	INTERMITTENT-Long dash and three short dashes (dots). Long dash .50" in length with three short dashes (dots) .030", spaces .030"	.006
	DRAINAGE END (arrowhead on type positive overlay) Specifications same as PERENNIAL and INTERMITTENT.	.006
	DRAINAGE AND /OR IRRIGATION (arrow on type positive overlay) Long dash line and one short dash (dot) with directional drainage arrow centered on alternate dashes. Long dashes .50" in length, with one short dash (dot) .030", spaces .030"	.006
	INTERMITTENT WATER AREAS (label on type positive overlay) Dashes line, dashes .05" in length, spaces .02" between dashes.	.006

# SUBPART B - NATIONAL COOPERATIVE SOIL SURVEY

## § 601.11 Specifications for Soils Overlay















		Scribed Line In Inches
	SOIL DELINEATIONS AND SOIL SYMBOLS (soil symbols on type positive overlay) SOIL BOUNDARY - Solid line.	.010
	NEATLINE Solid line.	.010
	GRID TICK (label the values on type positive overlay) Solid line .07" in length, generally perpendicular to neatline, road or map sheet limit. Grid systems that are angled with respect to map sheet layout must be placed as compiled on photobase map sheet.	.010
	ADJOINING SHEET DIVISION MARKER (label on type positive overlay) Solid line .15" in length. At right angles to and spaced .03" from neatline or map sheet limits in marginal area.	.010
	TOWNSHIP AND RANGE MARGIN BAR (label on type positive overlay) Solid line .10" in length to be shown in margin with township and range values or designators. Bar to extend .02" above type, .03" space beyond neatline or map sheet limits and .10" space between letters on each side of bar.	.012
	DAMS - LARGE (to scale) To scale, solid line following image of shoreline, and image of dam structure. Heavy centerline with image of structure extending to each opposite shoreline.	.006 .020
	DAMS - MEDIUM OR SMALL Solid line following image of shoreline with heavy bar length to scale following image of dam structure, (label if named with proper name or with the word (water) or letter (w) on type positive overlay).	.006 .020
	STREAMS, DOUBLE-LINE PERENNIAL - Solid double line to scale following image (as shown on compilation sheet).	.006
	CANALS OR DITCHES, DOUBLE-LINE (label on type positive overlay) Solid line following image of outer banks.	.006
LAKES, PONDS AND RESERVOIRS		
	PERENNIAL (label on type positive overlay) Solid line following image of shoreline (label with proper name). If unnamed label with the word (water) or letter (w) on type positive overlay.	.006
	QUARRIES, GRAVEL PITS, Etc. (large enough to identify with a boundary and soil lines ending abruptly on such boundary) Dashes .050" with spaces .030"	.010






# PART 601 - MAP SYMBOLS

## § 601.12 Specifications for Type Positive Overlay







### CULTURAL FEATURES

	POWER TRANSMISSION (normally not shown)
	PIPE LINE (normally not shown)
	FENCE (normally not shown)
	FARMSTEAD, HOUSE (omit in urban areas) Symbol centered on photobase image of building or complex.
	CHURCH - Symbol centered on photobase image of church.
	SCHOOL - Symbol centered on photobase image of school.
 Indian Mound	INDIAN MOUND (label)
 Historical Marker	LOCATED OBJECT (label)
	GRAVEL PIT
	MINE OR QUARRY
	TANK (label) Symbol centered on photobase image of large tank.
	WELLS, oil or gas
	WINDMILL
	KITCHEN MIDDEN

### LEVEES

	WITHOUT ROAD
	WITH ROAD (road drafted on cultural overlay)
	WITH RAILROAD (railroad drafted on cultural overlay)

### MISCELLANEOUS WATER FEATURES

	MARSH OR SWAMP
	SPRING
	WELL, artesian
	WELL, irrigation
	WET SPOT
	DRAINAGE END OR ARROWHEAD





# SUBPART B - NATIONAL COOPERATIVE SOIL SURVEY

## § 601.12 Specifications for Type Positive Overlay (Cont.)

### ROAD EMBLEMS & DESIGNATIONS













Single	Multi-Route Equal Classification	
		INTERSTATE
		FEDERAL
		STATE
	NA	COUNTY, FARM, RANCH, OR STATE SECONDARY

### ESCARPMENTS

	BEDROCK (points down slope)
	OTHER THAN BEDROCK (points down slope)
	SHORT STEEP SLOPE
	GULLY

	DEPRESSION OR SINK
	SOIL SAMPLE SITE

### MISCELLANEOUS

	BLOWOUT
	CLAYEY SPOT
	GRAVELLY SPOT
	GUMBO, SLICK OR SCABBY SPOT (sodic)
	DUMPS AND OTHER SIMILAR NON-SOIL AREAS
	PROMINENT HILL OR PEAK
	ROCK OUTCROP (include sandstone and shale)
	SALINE SPOT
	SANDY SPOT
	SEVERELY ERODED SPOT
	SLIDE OR SLIP (tips point upslope)
	STONY SPOT, VERY STONY SPOT

### RECOMMENDED AD HOC SOIL SYMBOLS

# PART 601 - MAP SYMBOLS

## § 601.13 GENERAL NOTES

For more detailed information, refer to the "Technical Specifications for Soil Map Finishing (scribing)."

Refer to "Guide for Map Symbols and Type" for ordering the type of conventional map symbols.

Geographic coordinate ticks and values should appear on surveys using orthophotography.

### Field sheets

For those map features designated to be shown on the type positive overlay, a #00 pen should be used when first compiling these features on field sheets. Pencil should not be used to designate the symbols that will appear on the type positive overlay.

The features when compiled should conform as close as possible to their respective illustrated symbols in this book.

The symbol for the field sheet match line will be used on the non-Atlas style field sheets only.


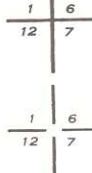










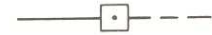











### Key to line weights

Symbol	Specs.
	.025"
	.020"
	.012"
	.010"



# SUBPART C - CONSERVATION PLANS

## § 601.20 BOUNDARIES, MARKS, AND MONUMENTS

National, State, or Province line		Township and section corners, recovered	
Minor civil division, town line (New England), or civil township line		Township and section corners, assumed	
County or Parish line		Farm, ranch, or other operations boundary	
National forest or reservation line (label)		Land capability, range, woodland site, wetland <sup>1</sup> , or Highly Erodible Land <sup>2</sup> boundaries	
Land-grant line		Range condition boundary	
Small park, airfield, etc. (label)		Range condition	EC, GC, FC, PC
City, village, borough, or urban area		Boundary monument	
Soil survey area boundary (takes precedence over county line)		Triangulation point, primary traverse station, or horizontal control station (label with name)	
Conservation district boundary		Permanent bench mark or vertical control station (and elevation)	
Soil boundary		Spot elevation	
Watershed boundary		Inclusion tie	
Field or land-use boundary		Field number	
Section line		Field acreage	320 ac.

<sup>1</sup>Wetland Classifications:  
 Converted Wetland CW  
 Farmed Wetland FW  
 Wetland W  
 Artificial Wetland AW  
 Minimal Effect MW  
 Prior Converted Cropland PC

<sup>2</sup>Highly Erodible Land Classifications:  
 Highly Erodible Land  
 Potentially Highly Erodible  
 Non-Highly Erodible

Conservation Reserve Program

CRP

HEL  
 PHEL  
 NHEL

# PART 601 - MAP SYMBOLS

## § 601.21 WORKS AND STRUCTURES

### Roads

Divided	
Good motor	
Poor motor or private	
Proposed, under construction (label)	
Trail (label)	
Interchange (to scale)	
Under construction overpass or underpass	

### Road designations

Interstate		or I-95
Federal		or US-71
State		or GA-6
County		or CO-231
Farm or ranch		or FR-2618

### Railroads

Double track	
Single track	
In juxtaposition	
Abandoned	

### Tunnels (label)

Road	
Railroad	

### Bridges

General symbol

Draw

Foot (label)

Ferries (label)

Large

Small

Fords (label)

Road

Trail

Airport

Airway beacon

Aqueduct (label)

Aqueduct tunnel

Breakwater, wharf, dock, or jetty

Buildings, houses

Cemetery

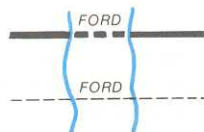
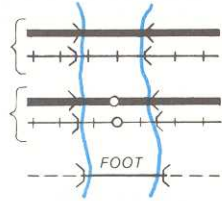
Church

Corral

Cotton gin

Farmstead

Fort



# SUBPART C - CONSERVATION PLANS

Gate or cattleguard (label)		Stack yard	
Lighthouse		Storage tanks (label)	
Located object (label)		Telephone communication line (label if underground)	
Lookout or forest fire station			
Mine shaft			
Mine tunnel opening			
Oil field		Existing	Planned
Oil or gas wells			
Power-transmission line (label if underground)		Pipe riser	
Prospect mine		Pump	
Railroad station		Trough	
Sawmill		Water tank (label)	
School		Windmill	
		Windmill and trough	

## § 601.22 SURFACE FEATURES

Escarpment, bedrock		Short steep slopes	
Escarpment, other than bedrock		Special purpose plantings (label)	
Important ridge top			

When existing fences are combined with other symbols, they may be shown as follows:

Fence along both sides of good motor road, etc.

Fence along one side of ditch, etc.

When planned fences are combined with other symbols, they may be shown as follows:

Planned fence along both sides of good motor road, etc.

Planned fence along one side of ditch, etc.

When fences or ditches, etc., are to be removed they may be shown as follows:

# PART 601 - MAP SYMBOLS

	Existing	Planned		Large	Small
Salt ground					
Shelterbelt	* * * *	+ + + +			
Terrace*					
	Large	Small		Large	Small
Borrow pit			Made land		
Cut and fill land			Mine dump		
Depressions			Prominent hills or mountain peaks		
Crossable with tillage implements			Quarry, mine		
Not crossable with tillage implements			Sand dunes (dune land)		
Contains water most of the time			Sand pit		
Gravel pit			Sand wash (riverwash)		
			Strip mine		

## § 601.23 HYDROGRAPHIC FEATURES

Canal, abandoned (label)		Falls and rapids	
Canal or ditch (label)		Intermittent lake or pond	
Canal lock (point upstream)		Intermittent streams	
Dam		Lake or pond	
Medium		Perennial streams	
Large (to scale)		Spring	
Drainage end or alluvial fan		Swamp or marsh (large areas)	
Dry lake		Swamp or marsh (small isolated areas)	
Dry wash			

# SUBPART C - CONSERVATION PLANS

Tidal marsh  
(salt or fresh water)



Vegetative waterway



Well, artesian



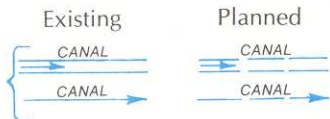
Well, irrigation



Wet spot



Canal (label)



Check dam or  
gully plug



Closed or tile drain



Dam and reservoir



Diversion\*



Diversion or  
spreader dam



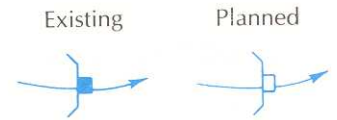
Division box or  
turnout



Drainage ditch  
(open drain)



Drop structure



Flume or siphon

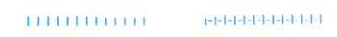


Irrigation ditch



Levee or dike

Without road



With road



Pickup ditch



Small reservoir, stock  
pond, tank, or charco



Excavated holding pit,  
lagoon



Spring development



Spring and trough



Streambank protection



Tide or flood gate



Well (label)



\* The dots represent blocks; the arrows represent spills



# SUBPART D - THEMATIC MAPS















## § 601.30 RECREATION SYMBOLS

Amphitheater		Camping ground	
Archaeological site		Camps	
Attractive view		Compass course	
Barrier		Disposal field, sewage	
Baseball diamond		Disposal field, garbage	
Bench		Diving platform	
Bike trail		Edge of usable area (label)	
Boating (S=sail, M=motor, R=row)		Fence	
Boat dock		First aid	
Boat ramp		Fishing (label "S" if state-stocked)	
Bonfire circle or barbeque pit		Float	
Building		Fountain	
Bulletin board or sign		Garbage can	
Bus stop		Garbage pickup station	

# PART 601 - MAP SYMBOLS

Garbage pit		Outdoor classroom	
Gate		Park	
Golf course		Parking	
Grill, fireplace, or stove		Picnic area	
Hiking trail		Picnic shelter	
Historic area		Picnic table	
Historic area on State or Federal Register		Point of interest	
Horseback riding		Recreational vehicle trail	
Hunting		Screen planting	
Hydrant		Septic tank	
Hydrant-fountain		Shelter	
Incinerator		Shooting range	
Lookout tower		Skating	
Marina		Ski area	
Observation blind			

# SUBPART D - THEMATIC MAPS

Ski jump		Toilet (to be faced as shown)	
Ski lift or rope tow		Trail bike trail	
Small recreation area (label as to type)		Trailer site	
Spring, developed		Water, potable	
Sun dial		Water tank (label)	
Swimming, public beaches		Weather station	
Telephone line		Well (label)	
Tent site		Winter recreation area	





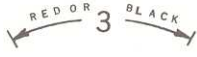
Note: Color may be used to differentiate between existing and planned features or between public and private facilities.

## § 601.31 AGRICULTURAL AND INDUSTRIAL SYMBOLS











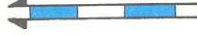








Berries		Grapes	
Dairy		Poultry	

# SUBPART E - WATERSHED PROJECTS

## § 601.40 WATERSHED FEATURES

Watershed project boundary		Area benefited	
Subwatershed or drainage area boundary		Drainage area in acres or square miles	D.A. 540 ac.
Drainage area controlled by a structure		Damage reach	

## § 601.41 PROJECT MEASURES

Floodwater retarding structure		Stabilization or sediment storage structure	
Water supply structure		Levee or dike	
Multiple-Purpose structure		Irrigation canal	
Channel work (flood prevention)			
New channel		Clearing & removal of loose debris	
Enlargement or realignment of existing channel or stream		Stabilization by continuous treatment	
Major clearing or snagging		Tentative sublaterals	
Channel work (drainage)			
New channel		Clearing & removal of loose debris	
Enlargement or realignment of existing channel or stream		Stabilization by continuous treatment	
Major clearing or snagging		Tentative sublaterals	
Area not requiring drainage			

\* Indicate purpose of water supply: I - Irrigation, M - Municipal, FW - Fish and wildlife, R - Recreation

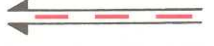
# PART 601 - MAP SYMBOLS

## Channel work (multipurpose)

New channel



Clearing & removal of loose debris



Enlargement or realignment of existing channel



Stabilization by continuous treatment



Major clearing or snagging

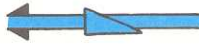


Sublaterals

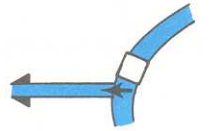


## Fish habitat development structures

Deflector



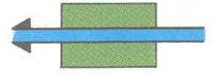
Oxbow development



Low water weirs



Wildlife area

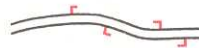


Tilted rock section (for fish passage or water temperature control)



## Miscellaneous measures

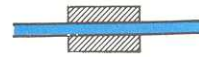
Roadside erosion control



Critical sediment-producing areas



Fixed improvement to be altered because of planned structural measures



Recreation development area



Area to be irrigated

