

Section 900
General Specifications

Section 901—Abbreviations, Acronyms, and Terms

901.01 Terms, Organizations, and Standards

(a) Specification Terms. These specifications are generally written in the imperative mood. In sentences using the imperative mood, the subject “the Contractor,” is implied. Also implied in this language is “shall,” “shall be,” or similar words or phrases. In material specifications, the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project.

Wherever “directed,” “required,” “prescribed,” or similar words are used, the “direction,” “requirement,” or “order” of the CO is intended. Similarly, wherever “approved,” “acceptable,” “suitable,” “satisfactory,” or similar words are used, they mean “approved by,” “acceptable to,” or “satisfactory to” the CO.

The word “will” generally pertains to decisions or actions of the CO.

Whenever in these specifications, or in other contract documents, the following terms (or pronouns in place of them) are used, the intent and meaning shall be interpreted as follows: reference to a specific standard, test, testing method, or specification shall mean the latest published edition or amendment that is in effect at the solicitation issue date for the public works contracts.

(b) Abbreviations and Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ABS	Acrylonitrile-Butadiene-Styrene
AQ	Actual Quantities
APA	American Plywood Association
ASTM	American Society for Testing and Material
AWPA	American Wood Preservers Association
cm	centimeter
CO	Contracting Officer
DQ	Design Quantities
EA	Each
g	grams
HDPE	High-Density Polyethylene
hr	hour
kg	kilogram
km	kilometer
kN	kilonewtons
kPa	kilopascals

LS	Lump Sum
LSQ	Lump Sum Quantities
m	meter
m ²	square meter
m ³	cubic meter
mm	millimeter
MPa	megapascals
N	newton
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
Pa	pascals
PE	polyethylene
PS	Product Standard issued by the U.S. Department of Commerce
PVC	polyvinyl chloride
SQ	Staked Quantities
WCLIB	West Coast Lumber Inspection Bureau
WWPA	Western Wood Products Association

(c) SI slope notation (vertical: horizontal). For slopes flatter than 1:1, express the slope as the ratio of one unit vertical to a number of units horizontal. For slopes steeper than 1:1, express the slope as the ratio of a number of units vertical to one unit horizontal.

Section 902—Definitions

When the following terms, or pronouns in place of them, are used in these specifications or in other contract documents, the intent and meaning are as follows:

Base Course. The layer or layers of specified material of designed thickness placed on a trailbed to support surfacing.

Batter. A backward and upward slope of the face of a wall.

Berm. The ridge of material formed on the outer edge of the trail that projects higher than the tread.

Borrow. Suitable materials taken from approved sources designated on the drawings or on the ground, to be used for embankments and backfilling.

Bridge. A structure, including supports, erected over a depression or stream, and having a deck for carry traffic.

Cap Rock. Rock placed in the top or uppermost layer in a constructed rock structure, such as a talus or rubble rock section or rock retaining wall.

Catch Point. The outer limits of a trailway where the excavation and/or embankment intersect with the ground line.

Clearing Limit. The area over and beside the trail that is cleared of trees, limbs, and other obstructions.

Climbing Turn. A reverse in direction of trail grade without a level landing used to change elevation on a steep slope.

Compacted. Consolidation that is obtained by tamping or rolling suitable material until no noticeable displacement of material is observed.

Contracting Officer (CO). An official of the Government with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the CO acting within the limits of their authority as delegated by the CO.

Culvert. A drainage structure composed of rock, metal, or wood that is placed approximately perpendicular to and under the trailway.

Cushion Material. Native or imported material, generally placed over rocky section of unsurfaced trail to provide a usable and maintained traveled way.

Danger Tree. An unstable tree 125 mm or greater in diameter at breast height that is likely to fall across the trail.

Designated on the Ground. The location of materials, work areas, and construction items, including lines and grades, marked on the ground with stakes, flagging, tags, or paint.

Drawings. Documents showing details for construction of a facility, including but not limited to straight-line diagrams, trail logs, standard drawings, construction logs, plan and profile sheets, cross-sections, diagrams, layouts, schematics, descriptive literature, and similar materials.

Duff. Organic material overlying rock or mineral soil.

Embankment. A structure of suitable material placed on the prepared ground surface and constructed to the trailbed elevation.

Excess Excavation. Material in the trailway in excess of that needed for construction of designed trailways.

Ford. A water-level stream crossing constructed to provide a level surface for safe traffic passage.

Full Bench. Trailbed constructed entirely on undisturbed material.

Grade. The vertical distance of ascent or descent of the trail expressed as a percentage of the horizontal distance.

Header Rock. Rock laid with the narrow end towards the face of the wall.

Inslope. Where the trail tread is sloped downward toward the backslope.

Mineral Soil. Soil or aggregate that is free from organic substances and contains no particles larger than 50 mm at their greatest dimension.

Outslope. Where the trail tread is sloped downward toward the embankment or daylight side of the trailway.

Sideslope. The natural slope of the ground, usually expressed as a percentage.

Slough. That material from the backslope or the area of the backslope that has raveled onto the trailbed.

Slump. Where the trailbed material has moved downward, causing a dip in the trail grade.

Special Project Specification. Specifications that detail the conditions and requirements peculiar to an individual project, including additions and revisions to the standard specifications.

Surfacing. Material placed on top of the trailbed or base course that provides the desired tread.

Suitable Material. Rock that can be accommodated in the trail structure, and soil free of duff with a recognizable granular texture.

Switchback. A reverse in direction of trail grade with a level landing used to change elevation on a steep slope, usually involving special treatment of the approaches, barriers, and drainages.

Trailbed. The finished surface on which base course or surfacing may be constructed. For trails without surfacing the trailbed is the tread.

Trailway. The portion of the trail within the limits of the excavation and embankment.

Tread. The surface portion of the trail upon which traffic moves.

Turnout. A short section of extra trail width to provide for passage of trail users.

Waterbar. A structure used for turning water off the trail, usually made of logs or stones.

Water Courses. Any natural or constructed channel where water naturally flows or will collect and flow during spring runoff, rainstorms, etc.

Section 903—Intent of Contract

903.01 Intent. The intent is to provide for the completion of the project described in the contract. Furnish all labor, materials, equipment, tools, transportation, and supplies and perform all work required to complete the project in accordance with drawings, specifications, and provisions of the contract.

Section 904—Maintenance for Traffic

904.01 General. Keep existing trails that are undergoing improvements open and maintained in such a condition as to safely accommodate traffic. Provide and maintain temporary detours, approaches, or crossings and intersections with trails, roads, businesses, parking lots, and campgrounds in a safe and passable condition. Perform no work that interferes or conflicts with traffic until a plan for handling traffic has been submitted and approved. Specific requirements for detours or closures are SHOWN ON THE DRAWINGS or in the SPECIAL PROJECT SPECIFICATIONS.

Before any suspension of work, take precautions necessary to prevent damage to the project, such as temporary detours, approaches, crossings, or intersections, and make provisions for normal drainage and to minimize erosion. Leave all trailways in a condition suitable for traffic unless otherwise specified.

The Government may permit use of portions of the project during periods when operations are shut down. All maintenance attributable to permitted use during periods of work suspension will be provided by the Government. The contractor is responsible for any maintenance that is not attributable to use or that is necessary during suspensions resulting from fault or negligence of the contractor.

Section 905—Control of Materials

905.01 Handling Materials. Transport and handle all materials to preserve their quality and fitness for the work. Stockpile, load, and transport aggregates in a manner that will preserve specified gradation and avoid contamination.

Store materials to assure the preservation of their quality and fitness for the work. Locate stored materials to facilitate their prompt inspection. Sites on Government-administered land that are not already designated may be used for storage purposes and for placing of equipment only when approved in advance by the CO. Restore all storage sites in accordance with requirements SHOWN ON THE DRAWINGS or as otherwise specified. Arrangements for storage on other than designated sites are the responsibility of the contractor.

905.02 Material Sources

(a) Designated Sources. Sources for materials such as, but not limited to, soil, rock, or logs that are not available from trailway excavation or clearing operations will be designated. Sources of local materials designated in the SPECIAL PROJECT SPECIFICATIONS or SHOWN ON THE DRAWINGS are guaranteed by the Government for the quality and quantity of material in the source.

Use all needed suitable material from the source. The designation of a source includes the right to use areas SHOWN ON THE DRAWINGS for the purposes designated (such as plant sites, stockpiles, haul roads). Operations are restricted to the confines of the area(s) designated.

(b) Contractor-Furnished Sources. Furnish material that produces an end product equivalent in performance to that specified.

905.03 Restoration. Shape and grade borrow areas on Government-administered land to make them stable and to minimize future erosion. Dispose of debris resulting from development of material sources by scattering, unless otherwise specified. Do not scatter debris within the clearing limits of trails or within roadsides. Cut off stumps to less than 300 millimeter (mm) above the ground as measured on the uphill side of the stump.

Section 906—Measurement and Payment

906.01 General. Measurement and payment for contract work will be made only for and under those pay items included in the SCHEDULE OF ITEMS. All other work and materials will be considered incidental and included in the payment of the PAY ITEMS in the SCHEDULE OF ITEMS.

When more than one class, size, or thickness is specified in the SCHEDULE OF ITEMS for any PAY ITEM, suffixes will be added to the item number to differentiate between the items.

906.02 Determination of Quantities. The following measurements and calculations are to be used to determine contract quantities for payment:

Make measurements for seeding, geotextiles, and erosion control blankets along slope lines.

For retaining walls, measure by the square meter of front wall face.

Measure structures according to neat lines SHOWN ON THE DRAWINGS or as altered by the CO in writing to fit field conditions. Make measurements along the centerline and parallel to the specified grade or foundation or as SHOWN ON THE DRAWINGS.

Deduct lengths for stairways, turnpike, puncheon, retaining walls, wire baskets, switchbacks, bridges, and bridge approaches from the measurement of excavation in Section 912 unless these items are specified as incidental to excavation in Section 912.

For standard manufactured items, such as fence, wire, plates, rolled shapes, and pipe conduits identified by gage, weight, section dimensions, and the like, such identification shall be considered the nominal weights or dimensions. Manufacturer's tolerances will be accepted unless controlled by tolerances in the cited specifications.

906.03 Units of Measurement. Payment will be made by units defined and determined according to standard metric measure and by the following:

(a) **Cubic Meter.** A measurement computed by one of the following methods:

- (1) Excavation, embankment, or borrow. The measurement computed by the average-end-area method from measurements made longitudinally along a centerline or other reference line.

- (2) Material in place or stockpiled. The measurement computed with the dimensions of the in-place material using average-end-area method or prismoidal formula.
- (3) Material in the Delivery Vehicle. The measurement computed using measurements of material in the hauling vehicles at the point of delivery. Vehicles shall be loaded to at least their water-level capacity. Leveling of the loads may be required when vehicles arrive at the delivery point.

(b) Each (EA). One complete unit, which may consist of one or more parts.

(c) Lump Sum (LS). The quantities that denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job.

906.04 Methods of Measurement. One of the following methods of measurement for determining final payment is DESIGNATED ON THE SCHEDULE OF ITEMS for each PAY ITEM:

(a) Designed Quantities. These quantities denote the final number of units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, and drawings. Changes in the number of units DESIGNATED IN THE SCHEDULE OF ITEMS may be authorized under the following conditions:

- (1) As a result of changes in the work approved by the CO.
- (2) As a result of the CO determining that errors exist in the original design that cause a PAY ITEM quantity to change by 15 percent or more.
- (3) As a result of the contractor submitting to the CO a written request showing evidence of errors in the original design that cause a PAY ITEM quantity to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designed quantity is believed to be in error.

(b) Staked Quantities (SQ). These quantities are determined from staked measurements prior to the construction.

(c) Actual Quantities (AQ). These quantities are determined from measurement of completed work.

(d) Vehicle Quantities. These quantities are measured or weighed in hauling vehicles.

(e) Lump Sum Quantities (LSQ). These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job.

906.05 Government-Furnished Materials. When materials are furnished by the Forest Service, the note "Government-Furnished Materials" will be added to the description of the PAY ITEM.

Section 907—Quality Assurance and Quantity Measurement

Description

907.01 Work. Work consists of providing certification that the quality and quantity of construction conform to the drawings, specifications, and requirements of the contract.

Construction

907.02 Certification and Measurements

(a) Offsite-Produced Materials. Furnish signed certificates executed by the manufacturer, supplier, or vendor, stipulating that all offsite-produced materials incorporated in the work meet applicable requirements SHOWN ON THE DRAWINGS or stated in the specifications. Furnish a certificate for each commodity or invoice.

(b) Quantity Measurements. Submit quantities to the CO for periodic progress payments, and the CO will compute payments. Quantities are subject to verification.

907.03 Records. Maintain a set of contract drawings depicting as-built conditions resulting from approved changes. Maintain the drawings in a current condition and indicate changes from the original contract drawings in red. Give the drawings to the CO upon the completion of the contract work.

Measurement

907.04 Method. There will be no separate measurement for this item.

Payment

907.05 Basis. Payment will be considered incidental to other pay items in this contract.

Section 908—Staking, Flagging, and Cleanup

Description

908.01 Work. This work consists of establishing any control points needed in addition to existing staking, and removing and disposing of all construction stakes, tags, flagging, and plastic ribbon from the project area.

Construction

908.02 General. The Government will set initial construction stakes or flagging, and control points, and furnish the contractor with all necessary information relating to lines, slopes, and grades. These stakes and flagging constitute the field control.

Furnish and maintain all additional stakes, flagging, templates, batter boards, and other materials and supplies necessary for marking and maintaining points and lines established. Do not perform work in the absence of control points. If any construction control points are destroyed, displaced, or erroneous, notify the CO. Uniformly contour alignment and construct grade from control point to control point.

Remove all construction stakes, tags, flagging, and plastic ribbon from the project area within 7 days after the final inspection of all other work on the project. Dispose of all stakes, tags, flagging, and plastic ribbon off Government-administered lands unless otherwise designated.

Measurement

908.03 Method. There will be no separate measurement for this item.

Payment

908.04 Basis. Trail staking, flagging and cleanup will be considered incidental to other pay items in this contract, and additional payment will not be made.