
USACE / NAVFAC / AFCEC / NASA UFGS-01 74 19 (January 2007)
Change 2 - 05/15

Preparing Activity: USACE Superseding
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UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated October 2015

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01/07

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SECTION 01 74 19

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT 01/07

NOTE: This guide specification covers the requirements for the management of non-hazardous construction and demolition waste materials.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

PART 1 GENERAL

NOTE: Military installations are required to direct at least 60 percent of their non-hazardous solid wastes (including waste from construction and demolition operations) from the waste stream. This guide specification should be used to reduce the amount of construction and demolition waste requiring landfill disposal or incineration and to promote more efficient use of construction materials during construction.

The requirements of this specification must be coordinated with the facility user to assure compatibility with the users waste management programs and to gain access to recycling centers and

storage areas. Also, this specification must be coordinated with Section 02 41 00 [DEMOLITION][AND][DECONSTRUCTION], Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, and other sections of the project specification requiring disposal of construction and demolition waste.

Disposal of hazardous or toxic materials and wastes is specified in Section 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS and Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

Every project must use a properly edited version of this guide specification..

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a RID outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED BD+C	(2009; R 2010) Leadership in Energy and Environmental Design(tm) Building Design and Construction (LEED-NC)
LEED GBDC Ref Guide	(2009; R 2010) LEED Reference Guide for Green Building Design, Construction and Major Renovations of Commercial and Institutional Buildings including Core & Shell and K-12 Projects

1.2 GOVERNMENT POLICY

NOTE: Diverting construction waste from the

landfill is required by federal mandate, and also contributes to the following LEED credit: MR2. Diverting 95 to 100 percent of waste may contribute to the following LEED credit: ID1. Coordinate requirements with Section 01 33 29 SUSTAINABILITY REPORTING. Include the bracketed sentence in Army projects if pursuing the credit.

Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and incinerators and to facilitate their recycling or reuse. Divert a minimum of [60][_____] percent by weight of total project solid waste from the landfill.

1.3 MANAGEMENT

Develop and implement a waste management program. Take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. The Environmental Manager, as specified in Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, is responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the project. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste, consider the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. Implement any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling accrue to the Contractor. Appropriately permit firms and facilities used for recycling, reuse, and disposal for the intended use to the extent required by federal, state, and local regulations. Also, provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

1.4 SUBMITTALS

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list to reflect only the submittals required for the project.

The Guide Specification technical editors have designated those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, if the submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

An "S" following a submittal item indicates that the submittal is required for the Sustainability Notebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.][for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability Notebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Waste Management Plan; G[, [_____]]; [(LEED BD+C)]

SD-11 Closeout Submittals

Records; [(LEED BD+C)]

1.5 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed Waste Management Plan and to develop a mutual understanding relative to the details of waste management. The requirements for this meeting may be fulfilled during the coordination and mutual understanding meeting outlined in Section 01 45 00.00 2001 45 00.00 10 QUALITY CONTROL. At a minimum, discuss environmental and waste management goals and issues at the following additional meetings:

- a. Pre-bid meeting.
- b. [Preconstruction][Pre-demolition] meeting.
- c. Regular [site][QC] meetings.

- d. Work safety meetings.

1.6 WASTE MANAGEMENT PLAN

NOTE: The requirements for the Contractor's waste management plan must be coordinated with the waste management plan for the installation. Revise this paragraph as necessary to meet the installation's requirements. Verify that items are able to be disposed of as specified in the technical sections. The contractor may include specified items in item (i) below if explanation or justification exists, to be approved by the Contracting Officer.

Submit a waste management plan within [15][_____] days after [contract award][notice to proceed] and not less than 10 days before the [preconstruction][pre-demolition] meeting. The plan demonstrates how to meet the the project waste diversion goal. Also, include the following in the plan:

- a. Name of individuals on the Contractor's staff responsible for waste prevention and management.
- b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- c. Description of the regular meetings to be held to address waste management.
- d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of wastes.
- e. Characterization, including estimated types and quantities, of the waste to be generated.
- f. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
- g. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity. Include the name, location, and phone number for each reuse facility to be used, and provide a copy of the permit or license for each facility.
- h. List of specific waste materials that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, location, and phone number, including a copy of the permit or license for each facility.
- i. Identification of materials that cannot be recycled/reused with an explanation or justification, to be approved by the Contracting Officer.

- j. Description of the means by which any waste materials identified in item (h) above will be protected from contamination.
- k. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- l. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

Revise and resubmit Plan as required by the Contracting Officer. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Distribute copies of the Waste Management Plan to each subcontractor, the Quality Control Manager, and the Contracting Officer.

1.7 RECORDS

NOTE: Use LEED Letter Template for Army projects if pursuing this credit. Include bracketed sentence for Army projects. Also for Army projects, include second paragraph regarding timber harvest and demolition by others if applicable and if pursuing LEED credit MR2.

Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. [Keep records in accordance with the LEED GBDC Ref Guide and using the LEED BD+C Letter Template.] Quantities may be measured by weight or by volume, but must be consistent throughout. List each type of waste separately noting the disposal or diversion date. Identify the landfill, recycling center, waste processor, or other organization used to process or receive the solid waste. Provide explanations for any waste not recycled or reused. With each application for payment, submit updated documentation for solid waste disposal and diversion, and submit manifests, weight tickets, receipts, and invoices specifically identifying the project and waste material. Make the records available to the Contracting Officer during construction, and [deliver to the Contracting Officer upon completion of the construction][include in the Sustainability Notebook] a copy of the records.

[Demolition accomplished by other parties on this project site count toward the project's total waste diversion [cumulative score for LEED BD+C and] for sustainability requirements. Information on the quantity and disposition of these materials will be provided by the Contracting Officer. Include this data in records, annotated to indicate that it was accomplished by another party.]

1.8 REPORTS

NOTE: This paragraph applies only to Army and Air Force projects. For Army projects, reports go to

**SWARS coordinator. For Air Force projects,
coordinate with Base and identify the appropriate
person to collect this data.**

Provide quarterly reports and a final report to [insert name], at [insert fax number, email address or mailing address]. Include project name, information for waste generated this quarter, and cumulative totals for the project in quarterly and final reports. Also include in each report, supporting documentation to include manifests, weight tickets, receipts, and invoices specifically identifying the project and waste material. Include timber harvest and demolition information, if any.

1.9 COLLECTION

Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in a manner that maximizes recyclability and salvagability of identified materials. Provide the necessary containers, bins and storage areas to facilitate effective waste management and clearly and appropriately identify them. Provide materials for barriers and enclosures around recyclable material storage areas which are nonhazardous and recyclable or reusable. Locate out of the way of construction traffic. Provide adequate space for pick-up and delivery and convenience to subcontractors. Recycling and waste bin areas are to be kept neat and clean, and handle recyclable materials to prevent contamination of materials from incompatible products and materials. Clean contaminated materials prior to placing in collection containers. Use cleaning materials that are nonhazardous and biodegradable. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. Separate materials by one of the following methods:

1.9.1 Source Separated Method.

Separate waste products and materials that are recyclable from trash and sorted as described below into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the following category types as appropriate to the project waste and to the available recycling and reuse programs in the project area:

- a. Land clearing debris.
- b. Asphalt.
- c. Concrete and masonry.
- d. Metal (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, lead brass, bronze).
 - (1) Ferrous.
 - (2) Non-ferrous.
- e. Wood (nails and staples allowed).

- f. Debris.
- g. Glass (colored glass allowed).
- h. Paper.
 - (1) Bond.
 - (2) Newsprint.
 - (3) Cardboard and paper packaging materials.
- i. Plastic.

Type	
1	Polyethylene Terephthalate (PET, PETE)
2	High Density Polyethylene (HDPE)
3	Vinyl (Polyvinyl Chloride or PVC)
4	Low Density Polyethylene (LDPE)
5	Polypropylene (PP)
6	Polystyrene (PS)
7	Other. Use of this code indicates that the package in question is made with a resin other than the six listed above, or is made of more than one resin listed above, and used in a multi-layer combination.

- j. Gypsum.
 - k. Non-hazardous paint and paint cans.
 - l. Carpet.
 - m. Ceiling tiles.
 - n. Insulation.
 - o. Beverage containers.
 - p. [_____].
- 1.9.2 Co-Mingled Method.

NOTE: Contact local recycling centers to determine if the Co-Mingled Method is allowed. Include the following section if applicable.

Place waste products and recyclable materials into a single container and

then transport to a recycling facility where the recyclable materials are sorted and processed.

1.9.3 Other Methods.

Other proposed methods may be used when approved by the Contracting Officer.

1.10 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

1.10.1 Reuse.

Give first consideration to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. [Coordinate reuse with the Contracting Officer.] [Reuse materials as indicated.] Consider sale or donation of waste suitable for reuse.

1.10.2 Recycle.

NOTE: Crushing lamps on site creates a hazardous waste stream, which has additional handling and disposal requirements.

Recycle waste materials not suitable for reuse, but having value as being recyclable. Recycle all fluorescent lamps, HID lamps, and mercury-containing thermostats removed from the site. Arrange for timely pickups from the site or deliveries to recycling facilities in order to prevent contamination of recyclable materials.

1.10.3 Compost

NOTE: If a compost pile can remain on site after construction is complete, and if there is a use for the finished compost, employ composting practices throughout the project.

Consider composting on site if a reasonable amount of compostable material will be available. Compostable materials include plant material, sawdust, and certain food scraps.

1.10.4 Waste.

NOTE: Disposal by landfill or incineration on the installation should not be provided as a "no Cost" item. If necessary to use such facilities the Contractor should be charged the prevailing commercial rate.

Dispose of materials with no practical use or economic benefit to waste-to-energy plants where available. As the last choice, dispose of materials at a landfill or incinerator.

1.10.5 Return

Set aside and protect misdelivered and substandard products and materials and return to supplier for credit.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used. -- End of Section --