
USACE / NAVFAC / AFCEC UFGS-02 41 00 (August 2022)

Preparing Activity: USACE

Superseding
UFGS-02 41 00 (May 2010)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2025

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SECTION 02 41 00

DEMOLITION

08/22

NOTE: This guide specification covers the requirements for demolition, deconstruction, dismantling, reconditioning and disposal of existing building materials, equipment and utilities as a part of new construction or renovation work.

The requirements for demolition and deconstruction activities must be coordinated with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL. Disposal of demolition waste or recycling of deconstructed materials must be properly planned and managed in the Construction Waste Management Plan.

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 item(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).

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<http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/for>

PART 1 GENERAL

NOTE: Where premises are occupied, certain spaces

may exist where activities cannot be interrupted or disturbed during normal working hours. To prevent disputes or possible contract claims resulting from restriction of demolition or removal work in such spaces, provisions for scheduling of the work must be specified in the contract documents. Restrictions for scheduling of demolition or removal work in areas adjacent to or in occupied spaces should reflect the requirements resulting from the consultation with occupants of the affected spaces. These provisions are necessary to alert prospective bidders about the spaces where business is not to be interrupted or disturbed during construction.

Delete requirements if inapplicable.

Where suspect deck conditions are encountered during design investigation, identify and include appropriate repair and safety provisions in the design documents to draw attention to the suspect areas and the need for additional safety precautions.

Include "Notification of Demolition and Renovation" form for Hawaii only.

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 Reference Identifier (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.

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

AHRI Guideline K

(2009) Guideline for Containers for Recovered Non-Flammable Fluorocarbon Refrigerants

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ASSP A10.6 (2006) Safety & Health Program
Requirements for Demolition Operations -
American National Standard for
Construction and Demolition Operations

CARPET AND RUG INSTITUTE (CRI)

CRI 104 (2015) Carpet Installation Standard for
Commercial Carpet

CRI 105 (2015) Carpet Installation Standard for
Residential Carpet

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational
Health (SOH) Requirements

U.S. DEFENSE LOGISTICS AGENCY (DLA)

DLA 4145.25 (Jun 2000; Reaffirmed Oct 2010) Storage
and Handling of Liquefied and Gaseous
Compressed Gases and Their Full and Empty
Cylinders;
[https://www.dla.mil/Portals/104/Documents/Dispositions/
/ddsr/docs/cylinderjointpub.pdf](https://www.dla.mil/Portals/104/Documents/Dispositions/ddsr/docs/cylinderjointpub.pdf)

U.S. DEPARTMENT OF DEFENSE (DOD)

DOD 4000.25-1-M (2006) MILSTRIP - Military Standard
Requisitioning and Issue Procedures

MIL-STD-129 (2014; Rev R; Change 1 2018; Change 2
2019; Change 3 2023) Military Marking for
Shipment and Storage

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 61 National Emission Standards for Hazardous
Air Pollutants

40 CFR 82 Protection of Stratospheric Ozone

49 CFR 173.301 Shipment of Compressed Gases in Cylinders
and Spherical Pressure Vessels

REPUBLIC OF KOREA (ROK) LAW

WMA Act (25 March 2025) Korean Waste Management
Act (WMA), No. 20859

WMA MD (4 April 2025) Korean Ministry of
Environment, Ministerial Decree (MD) of
WMA, No. 1168

WMA PD (2 June 2025) Korean Presidential Decree
(PD) of WMA, No. 35590

U.S. FORCES KOREA (USFK)

USFK Manual 4715.05

(2024) Environmental Governing Standards
(EGS)

1.2 PROJECT DESCRIPTION

NOTE: Make a determination as to whether any material of a hazardous nature, as classified in the National Emissions Standards, OSHA, or EPA regulations, will result from the work described. If such material is determined likely, specify precautions and standards to be complied with. Since the Contractor performs the work, the Contractor will be the one responsible for complying with all necessary regulations.

Protect personnel from possible airborne contaminants, such as asbestos fibers, dried fecal matter (bird droppings) and metal dusts.

For Navy projects: Contact an industrial hygienist at (1) A Navy Regional Medical Center, (2) A Navy Environmental and Preventive Medicine Unit, or (3) the Navy Environmental Health Center for assistance. Disposal of materials must not endanger or pollute the environment. Obtain assistance from the environmental branch of the Engineering Field Division of the Naval Facilities Engineering Systems Command or from the Naval Facilities Engineering Service Center, Norfolk, Virginia.

Non-friable materials containing asbestos, such as cement-asbestos siding and roofing and vinyl-asbestos flooring materials, normally do not require special handling and disposal procedures unless such materials are sawn, ground, sanded, drilled, pulverized, or handled in such a manner that will cause dust and airborne asbestos fiber to be released. Thus the removal of non-friable asbestos will not normally require the use of Section 02 82 00 ASBESTOS REMEDIATION. If the project contains non-friable asbestos that is considered to be hazardous due to material condition (broken down or excessively old and decayed) or demolition or deconstruction procedures to be used, then specify the non-friable asbestos to be removed in accordance with Section 02 82 00.

For "NAVFAC SE" projects use "project site" in Guantanamo Bay, Cuba; for all other projects use "station daily."

Deconstruction is the process of taking apart a facility with the primary goal of preserving the value of all useful building materials, so that they may be reused or recycled. It should be considered

when adaptive reuse of a building is not an option,
and may be used in conjunction with demolition.
Deconstruction minimizes demolition landfill
materials and reduces material costs for the
converted facility. Diverting demolition waste from
the landfill contributes to meeting Federal
requirements for waste diversion. Coordinate with
Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND
DISPOSAL.

1.2.1 Definitions

1.2.1.1 Demolition

Demolition is the process of tearing apart and removing any feature of a facility together with any related handling and disposal operations.

1.2.1.2 Demolition Plan

Demolition Plan is the planned steps and processes for managing demolition activities and identifying the required sequencing activities and disposal mechanisms.

1.2.2 Demolition Plan

NOTE: Either a Demolition Plan or a Deconstruction Plan is required. A project requiring both demolition and deconstruction work will name the plan according to the majority of the work being performed, and the plan will include requirements for both types of work.

Prepare a [Demolition Plan](#) and submit proposed salvage, demolition, and removal procedures for approval before work is started. Include in the plan procedures for careful removal and disposition of materials specified to be salvaged, coordination with other work in progress[, a disconnection schedule of utility services, and airfield lighting, a detailed description of methods and equipment to be used for each operation and of the sequence of operations. [Identify components and materials to be salvaged for reuse or recycling with reference to paragraph Existing Facilities to be Removed.](#) Append tracking forms for all removed materials [indicating type, quantities, condition, destination, and end use.](#) Coordinate with Waste Management Plan in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL. Include statements affirming Contractor inspection of the existing roof deck and its suitability to perform as a safe working platform or if inspection reveals a safety hazard to workers, state provisions for securing the safety of the workers throughout the performance of the work. Provide procedures for safe conduct of the work in accordance with [EM 385-1-1](#). Plan must be approved by Contracting Officer prior to work beginning.

1.2.3 General Requirements

Do not begin demolition or deconstruction until authorization is received from the Contracting Officer. [The work of this section is to be performed in a manner that maximizes the value derived from the salvage and](#)

recycling of materials. The work includes demolition, salvage of identified items and materials, and removal of resulting rubbish and debris. Remove rubbish and debris from Government property daily, unless otherwise directed. Store materials that cannot be removed daily in areas specified by the Contracting Officer. In the interest of occupational safety and health, perform the work in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections.

1.3 ITEMS TO REMAIN IN PLACE

Comply with FAR 52.236-9 to protect existing vegetation, structures, equipment, utilities, and improvements. Coordinate the work of this section with all other work indicated. Construct and maintain shoring, bracing, and supports as required. Ensure that structural elements are not overloaded. Increase structural supports or add new supports as may be required as a result of any cutting, removal, deconstruction, or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition, deconstruction, or removal work. Repairs, reinforcement, or structural replacement require approval by the Contracting Officer prior to performing such work.

1.3.1 Existing Construction Limits and Protection

Do not disturb existing construction beyond the extent indicated or necessary for installation of new construction. Provide temporary shoring and bracing for support of building components to prevent settlement or other movement. Provide protective measures to control accumulation and migration of dust and dirt in all work areas. Remove snow, dust, dirt, and debris from work areas daily.

1.3.2 Weather Protection

For portions of the building to remain, protect building interior and materials and equipment from the weather at all times. Where removal of existing roofing is necessary to accomplish work, have materials and workmen ready to provide adequate and temporary covering of exposed areas.

1.3.3 Trees

Protect trees within the project site which might be damaged during demolition or deconstruction, and which are indicated to be left in place, by a 1.8 m high fence. Erect and secure fence a minimum of 1.5 m from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees. Replace any tree designated to remain that is damaged during the work under this contract with like-kind or as approved by the Contracting Officer.

1.3.4 Utility Service

NOTE: Delete the first bracketed sentence when the
Government will disconnect and seal utilities.
Delete the second bracketed sentence when the
Contractor will disconnect and seal utilities.

Maintain existing utilities indicated to stay in service and protect against damage during demolition and deconstruction operations. Prior to

start of work, utilities serving each area of alteration or removal will be shut off by the Government and disconnected and sealed by the Contractor.

1.3.5 Facilities

Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. Floors, roofs, walls, columns, pilasters, and other structural components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, must remain standing without additional bracing, shoring, or lateral support until demolished or deconstructed, unless directed otherwise by the Contracting Officer. Ensure that no elements determined to be unstable are left unsupported and place and secure bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, deconstruction, or demolition work performed under this contract.

1.4 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted. Where burning is permitted, adhere to [USFK Manual 4715.05](#).

1.5 AVAILABILITY OF WORK AREAS

Areas in which the work is to be accomplished will be available [at contract award.] [in accordance with the demolition plan or directed by the Contracting Officer, or [Base Civil Engineer (BCE)][Directorate of Public Works (DPW)].

1.6 SUBMITTALS

NOTE: Review submittal description (SD) definitions in Section [01 33 00 SUBMITTAL PROCEDURES](#) and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified 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 Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters 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

and Air Force projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

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

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Demolition Plan; G

Existing Conditions

SD-07 Certificates

Notification; G

SD-11 Closeout Submittals

Receipts

1.7 QUALITY ASSURANCE

Submit timely notification of demolition and renovation projects to Federal, State, regional, and local authorities in accordance with 40 CFR 61, Subpart M. Notify the local air pollution control district/agency and the Contracting Officer in writing 10 working days prior to the commencement of work in accordance with 40 CFR 61, Subpart M. Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," conform to the safety requirements contained in ASSP A10.6. Comply with the Environmental Protection Agency requirements specified. Use of explosives will not be permitted.

1.7.1 Dust and Debris Control

Prevent the spread of dust and debris to occupied portions of the building and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution. Vacuum and dust the work area daily. Sweep pavements as often as necessary to control the spread of debris that may result in foreign object damage potential to aircraft.

1.8 PROTECTION

NOTE: Delete requirements if inapplicable. For aircraft safety, Air Force ETL 11-29: Use of Light Emitting Diode (LED) Fixtures on Air Force Installations and Enduring/Contingency Locations, dated 22 Dec 2011, does NOT allow use of LED fixtures for Obstruction Lighting. For work on airfield, coordinate with the Airfield manager the construction phasing plan and operational safety on the airfield during construction per UFC 3-260-01, Section 14.

1.8.1 Traffic Control Signs

- a. Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Contracting Officer prior to beginning such work.

1.8.2 Protection of Personnel

Before, during and after the demolition work continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the project site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.

1.9 FOREIGN OBJECT DAMAGE (FOD)

NOTE: Delete requirements if inapplicable.

Some large scale apron, hangar, or other type projects to be constructed adjacent to areas with operational aircraft may require temporary barricades or debris fences installed in place prior to the start of work. The station's air operations and public works departments must be contacted by the designer to determine project requirements. If fences or other type barricades are required, they must be designed and located to suit the project

Aircraft and aircraft engines are subject to FOD from debris and waste material lying on airfield pavements. Remove all such materials that may appear on operational aircraft pavements due to the Contractor's operations. If necessary, the Contracting Officer may require the Contractor to install a temporary barricade at the Contractor's expense to control the spread of FOD potential debris. Provide a barricade consisting of a fence covered with a fabric designed to stop the spread of debris. Anchor the fence and fabric to prevent displacement by winds or jet/prop blasts. Remove barricade when no longer required.

1.10 RELOCATIONS

Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Repair or replace items to be relocated which are damaged by the Contractor with new undamaged items as approved by the Contracting Officer.

1.11 EXISTING CONDITIONS

Before beginning any demolition or deconstruction work, survey the site and examine the drawings and specifications to determine the extent of the work. Record existing conditions in the presence of the Contracting Officer [or the Contracting Officer's Representative] [and a representative from the non-federal sponsor] showing the condition of structures and other facilities adjacent to areas of alteration or removal. Photographs or electronic images with a minimum resolution of 3072 x 2304 pixels, capable of a print resolution of 300 dpi, will be acceptable as a record of existing conditions. Include in the record the elevation of the top of foundation walls, finish floor elevations, possible conflicting electrical conduits, plumbing lines, alarms systems, the location and extent of existing cracks and other damage and description of surface conditions that exist prior to starting work. It is the Contractor's responsibility to verify and document all required outages which will be required during the course of work, and to note these outages on the record document. Submit survey results to the Contracting Officer [or the Contracting Officer's Representative].

PART 2 PRODUCTS

2.1 FILL MATERIAL

- a. Comply with excavating, backfilling, and compacting procedures for soils used as backfill material to fill basements, voids, depressions or excavations resulting from demolition or deconstruction of structures

PART 3 EXECUTION

3.1 EXISTING FACILITIES TO BE REMOVED

NOTE: Thoughtful and considered disassembly as opposed to standard demolition will produce more usable "reusables" and will help prevent damage to items scheduled to remain.

Suggested uses for salvaged materials are as follows.

1. Whole buildings can be sold, leased, or donated and either moved or dismantled.
2. Separate asphalt roofing materials for milling and recycling.
3. Salvage whole bricks for reuse, keeping exterior bricks separate. Salvage remaining masonry to be crushed and used as landscape cover, sub-base material, or fill.
4. Salvage precast concrete panels as whole units for use as erosion control or landscape features. Salvage whole concrete blocks for reuse. Salvage concrete block pieces to be crushed and used as

sub-base material or fill. Crush and grade remaining concrete for use as riprap, aggregate, sub-base material, or fill.
5. Chipped or shredded wood can be used onsite as ground cover, mulch, compost, pulp, or process fuel.
6. Crushed porcelain may be used for fill.
7. Wood cleared from the site can be chipped or shredded for use as ground cover, mulch, compost, pulp, or process fuel.
8. Salvage clean, unpainted, non-biocide-treated gypsum board to be ground up and used as soil amendment or recycled.

Inspect and evaluate existing structures onsite for reuse. Disassemble existing construction scheduled to be removed for reuse. Dismantled and removed materials are to be separated, set aside, and prepared as specified, and stored or delivered to a collection point for reuse, remanufacture, recycling, or other disposal, as specified. Designate materials for reuse onsite whenever possible.

3.1.1 Structures

NOTE: Where necessary, add additional requirements relating to specific types of existing construction such as masonry, concrete, and other special requirements for removal work. It is very difficult to specify particular removal criteria in a guide specification or even a project specification. It may be more advantageous to show the work on the drawings.

- a. Remove existing structures indicated to be removed to grade. Remove interior walls, other than retaining walls and partitions, to top of concrete slab on ground. Break up basement slabs to permit drainage. Remove sidewalks, curbs, gutters and street light bases as indicated.
- b. Demolish structures in a systematic manner from the top of the structure to the ground. Complete demolition work above each tier or floor before the supporting members on the lower level are disturbed. Demolish concrete and masonry walls in small sections. Remove structural framing members and lower to ground by means of derricks, platforms hoists, or other suitable methods as approved by the Contracting Officer.
- c. Locate demolition and deconstruction equipment throughout the structure and remove materials so as to not impose excessive loads to supporting walls, floors, or framing.
- d. Building, or the remaining portions thereof, not exceeding 25 m in height may be demolished by the mechanical method of demolition.

3.1.2 Utilities and Related Equipment

3.1.2.1 General Requirements

Do not interrupt existing utilities serving occupied or used facilities,

except when authorized in writing by the Contracting Officer. Do not interrupt existing utilities serving facilities occupied and used by the Government except when approved in writing and then only after temporary utility services have been approved and provided. Do not begin demolition or deconstruction work until all utility disconnections have been made. Shut off and cap utilities for future use, as indicated.

3.1.2.2 Disconnecting Existing Utilities

NOTE: Where the materials, meters, or related equipment to be affected in the area of demolition or deconstruction are the property of the local utility companies and not of the Government, the specifier must contact them, determine the disposition of the existing utilities, and modify the requirements herein as needed.

Remove existing utilities , as indicated and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer. When utility lines are encountered but are not indicated on the drawings, notify the Contracting Officer prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer.

3.1.3 Chain Link Fencing

Remove chain link fencing, gates and other related salvaged items scheduled for removal and transport to designated areas. Remove gates as whole units. Cut chain link fabric to 7 m lengths and store in rolls off the ground.

3.1.4 Paving and Slabs

NOTE: Delete requirements if inapplicable.

[Remove [ground] [scarified] [sawcut] concrete and asphaltic concrete paving and slabs [including aggregate base] [as indicated] to a depth of [_____] mm below [existing adjacent] [new finish] grade. [Demolition of concrete pavement on airfields and other heavy duty pavements will follow methods in Section 32 13 14.13 CONCRETE PAVING FOR AIRFIELDS AND OTHER HEAVY DUTY PAVEMENTS.][Provide neat sawcuts at limits of pavement removal as indicated.]] Move, grind and store pavement and slabs designated to be recycled and utilized in this project as directed by the Contracting Officer. Remove pavement and slabs not to be used in this project from the [installation] [project site] at Contractor's expense.

3.1.5 Roofing

NOTE: Delete requirements if inapplicable.

Where suspect deck conditions are encountered during design investigation, identify and include appropriate repair and safety provisions in the

**design documents to draw attention to the suspect
areas and the need for additional safety precautions.**

[Remove existing roof system and associated components in their entirety down to existing roof deck.] [Remove [built-up] [single-ply] roofing to effect the connections with new flashing or roofing.] [Remove gravel surfacing from existing roofing felts for a minimum distance of 450 mm back from the cut. Remove gravel without damaging felts.] [Salvage asphalt roofing materials.] [Cut existing [felts] [membrane] [and insulation] along straight lines.] [Remove roofing system [and insulation] without damaging the roof deck.] Sequence work to minimize building exposure between demolition or deconstruction and new roof materials installation.

3.1.5.1 Temporary Roofing

Install temporary roofing and flashing as necessary to maintain a watertight condition throughout the course of the work. Remove temporary work prior to installation of permanent roof system materials unless approved otherwise by the Contracting Officer. [The existing [deck] [and support structure] is deteriorated where indicated, such that ability to support foot traffic and construction loads is unknown. Make provisions for worker safety during demolition, deconstruction, and installation of new materials as described in paragraphs entitled "Statements" and "Regulatory and Safety Requirements."]

3.1.5.2 Reroofing

When removing the existing roofing system from the roof deck, remove only as much roofing as can be recovered by the end of the work day, unless approved otherwise by the Contracting Officer. Do not attempt to open the roof covering system in threatening weather. Reseal all openings prior to suspension of work the same day.

3.1.6 Masonry

Sawcut and remove masonry so as to prevent damage to surfaces to remain[, to removed materials being salvaged] [and to facilitate the installation of new work]. Where new masonry adjoins existing, abut or tie the new work into the existing construction as [indicated] [specified for the new work]. Provide square, straight edges and corners where existing masonry adjoins new work and other locations.[Salvage masonry removed in whole blocks and store for reuse.] [Masonry removed in pieces must be crushed[for use as aggregate]].

3.1.7 Concrete

Saw concrete along straight lines to a depth of a minimum 50 mm. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. Break out the remainder of the concrete provided that the broken area is concealed in the finished work, and the remaining concrete is sound. At locations where the broken face cannot be concealed, grind smooth or saw cut entirely through the concrete. [Salvage removed concrete.] [Sawcuts in existing [concrete sidewalk] [roads] [concrete pads] [parking areas] must be at the nearest existing expansion joint or weakened plane joint and at full depth.]

3.1.8 Structural Steel

NOTE: Delete structural steel and miscellaneous metals only if it is determined that there are no existing metals or structural steel to be recycled or salvaged.

Dismantle structural steel at field connections and in a manner that will prevent bending or damage. Salvage for [reuse] [recycle] structural steel, steel joists, girders, angles, plates, columns and shapes. [Do not use flame-cutting torches] [Flame-cutting torches are permitted when other methods of dismantling are not practical]. Transport steel joists and girders as whole units and not dismantled. Transport structural steel shapes to a designated [storage area] [recycling facility] [area as directed by the Contracting Officer], stacked according to size, type of member and length, and stored off the ground, protected from the weather.

3.1.9 Miscellaneous Metal

Salvage shop-fabricated items such as access doors and frames, steel gratings, metal ladders, wire mesh partitions, metal railings, metal windows and similar items as whole units. Salvage light-gage and cold-formed metal framing, such as steel studs, steel trusses, metal gutters, roofing and siding, metal toilet partitions, toilet accessories and similar items. [Scrap metal is the Contractor's property.] Recycle scrap metal as part of demolition and deconstruction operations. Provide separate containers to collect scrap metal and transport to a scrap metal collection or recycling facility, in accordance with the Waste Management Plan.

3.1.10 Carpentry

Salvage for [reuse] [recycle] lumber, millwork items, and finished boards, and sort by type and size. [[Chip or shred and]recycle salvaged wood unfit for reuse, except stained, painted, or treated wood.] [Salvage] [Remove] windows, doors, frames, and cabinets, and similar items as whole units, complete with trim and accessories. [Do not remove hardware attached to units, except for door closers.] [Salvage hardware attached to units for reuse.] Brace the open end of door frames to prevent damage.

3.1.11 Carpet

Remove existing carpet for reclamation in accordance with manufacturer recommendations and as follows. Remove used carpet in large pieces, roll tightly, and pack neatly in a container. Remove adhesive according to recommendations of the Carpet and Rug Institute (CRI). Provide adhesive removal solvents in compliance with CRI 104/CRI 105. Recycle removed carpet cushion.

3.1.12 Acoustic Ceiling Tile

Remove, neatly stack, and recycle acoustic ceiling tiles. Recycling may be available with manufacturer. Otherwise, give priority to a local recycling organization. Recycling is not required if the tiles contain or may have been exposed to asbestos material.

3.1.13 Airfield Lighting

Remove existing airfield lighting as indicated and terminate in a manner satisfactory to the Contracting Officer. Remove [edge lights], [associated transformers] [and] [_____] as indicated and [deliver to a location on the station in accordance with instructions of the Contracting Officer] [dispose of off station] [_____].

3.1.14 Patching

Where removals leave holes and damaged surfaces exposed in the finished work, patch and repair these holes and damaged surfaces to match adjacent finished surfaces, using on-site materials when available. Where new work is to be applied to existing surfaces, perform removals and patching in a manner to produce surfaces suitable for receiving new work. Make finished surfaces of patched area flush with the adjacent existing surface and match the existing adjacent surface as closely as possible to texture and finish. Provide patching as specified and indicated, and include the following:

- a. Concrete and Masonry: Completely fill holes and depressions, [caused by previous physical damage or] left as a result of removals in existing masonry walls to remain, with an approved masonry patching material, applied in accordance with the manufacturer's printed instructions.
- b. Where existing partitions have been removed leaving damaged or missing resilient tile flooring, patch to match the existing floor tile.
- c. Patch acoustic lay-in ceiling where partitions have been removed. Make the transition between the different ceiling heights by continuing the higher ceiling level over to the first runner on the lower ceiling and closing the vertical opening with a painted sheet metal strip.

3.1.15 Air Conditioning Equipment

NOTE: Delete requirements if inapplicable.

**Quantify by weight the amount and type of
refrigerant to be recovered and indicate on plans.**

**Directives from the Secretary of the Navy prohibit
sale or transfer of Class I ODS materials outside of
the Navy without prior approval from the Chief of
Naval Operations or the Commandant of the Marine
Corps.**

[Remove air conditioning, refrigeration, and other equipment containing refrigerants without releasing chlorofluorocarbon refrigerants to the atmosphere in accordance with the Clean Air Act Amendment of 1990.]
[Recover all refrigerants prior to removing air conditioning, refrigeration, and other equipment containing refrigerants and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."] [Turn in salvaged Class I ODS refrigerants as specified in paragraph, "Salvaged Materials and Equipment."]

3.1.16 Cylinders and Canisters

Remove all fire suppression system cylinders and canisters and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."

3.1.17 Locksets on Swinging Doors

**NOTE: Use this paragraph when project includes
removal and disposal of hinged or pivoted swinging
doors. (This is a security measure.)**

Remove all locksets from all swinging doors indicated to be removed and disposed of. Deliver the locksets and related items to a designated location for receipt by the Contracting Officer after removal.

3.1.18 Mechanical Equipment and Fixtures

**NOTE: Delete, revise, or add to the text to cover
the project requirements. Materials and equipment
scheduled for salvage should be noted on the
drawings.**

Disconnect mechanical hardware at the nearest connection to existing services to remain, unless otherwise noted. Disconnect mechanical equipment and fixtures at fittings. Remove service valves attached to the unit. Salvage each item of equipment and fixtures as a whole unit; listed, indexed, tagged, and stored. Salvage each unit with its normal operating auxiliary equipment. Transport salvaged equipment and fixtures, including motors and machines, to a designated [on station] storage area as directed by the Contracting Officer. Do not remove equipment until approved. Do not offer low-efficiency equipment for reuse[; provide to recycling service for disassembly and recycling of parts].

3.1.18.1 Preparation for Storage

Remove water, dirt, dust, and foreign matter from units; drain tanks, piping and fixtures; if previously used to store flammable, explosive, or other dangerous liquids, steam clean interiors. Seal openings with caps, plates, or plugs. Secure motors attached by flexible connections to the unit. Change lubricating systems with the proper oil or grease.

3.1.18.2 Piping

Disconnect piping at unions, flanges and valves, and fittings as required to reduce the pipe into straight lengths for practical storage. Store salvaged piping according to size and type. If the piping that remains can become pressurized due to upstream valve failure, attach end caps, blind flanges, or other types of plugs or fittings with a pressure gage and bleed valve to the open end of the pipe to ensure positive leak control. Carefully dismantle piping that previously contained gas, gasoline, oil, or other dangerous fluids, with precautions taken to prevent injury to persons and property. Store piping outdoors until all fumes and residues are removed. Box prefabricated supports, hangers, plates, valves, and specialty items according to size and type. Wrap

sprinkler heads individually in plastic bags before boxing. Classify piping not designated for salvage, or not reusable, as scrap metal.

3.1.18.3 Ducts

Classify removed duct work as scrap metal.

3.1.18.4 Fixtures, Motors and Machines

Remove and salvage fixtures, motors and machines associated with plumbing, heating, air conditioning, refrigeration, and other mechanical system installations. Salvage, box and store auxiliary units and accessories with the main motor and machines. Tag salvaged items for identification, storage, and protection from damage. Classify [non-porcelain]broken, damaged, or otherwise unserviceable units and not caused to be broken, damaged, or otherwise unserviceable as debris to be disposed of by the Contractor. [Salvage and crush porcelain plumbing fixtures unsuitable for reuse.]

3.1.19 Electrical Equipment and Fixtures

Salvage motors, motor controllers, and operating and control equipment that are attached to the driven equipment. Salvage wiring systems and components. Box loose items and tag for identification. Disconnect primary, secondary, control, communication, and signal circuits at the point of attachment to their distribution system.

3.1.19.1 Fixtures

Remove and salvage electrical fixtures. Salvage unprotected glassware from the fixture and salvage separately. Salvage incandescent, mercury-vapor, and fluorescent lamps and fluorescent ballasts manufactured prior to 1978, boxed and tagged for identification, and protected from breakage.

3.1.19.2 Electrical Devices

Remove and salvage switches, switchgear, transformers, conductors including wire and nonmetallic sheathed and flexible armored cable, regulators, meters, instruments, plates, circuit breakers, panelboards, outlet boxes, and similar items. Box and tag these items for identification according to type and size.

3.1.19.3 Wiring Ducts or Troughs

Remove and salvage wiring ducts or troughs. Dismantle plug-in ducts and wiring troughs into unit lengths. Remove plug-in or disconnecting devices from the busway and store separately.

3.1.19.4 Conduit and Miscellaneous Items

Salvage conduit except where embedded in concrete or masonry. Consider corroded, bent, or damaged conduit as scrap metal. Sort straight and undamaged lengths of conduit according to size and type. Classify supports, knobs, tubes, cleats, and straps as debris to be removed and disposed.

3.1.20 Elevators and Hoists

Remove elevators, hoists, and similar conveying equipment and salvage as whole units, to the most practical extent. Remove and prepare items for salvage without damage to any of the various parts. Salvage and store rails for structural steel with the equipment as an integral part of the unit.

3.1.21 Aqueous Film-Forming Foam (AFFF) Fire Protection System

If the project contains replacement or removal of AFFF (C6 and C8), the removal work should be approved by Environment Section, Far East District, USACE thru Contracting Officer's Representative (COR) prior to initiation.

3.2 CONCURRENT EARTH-MOVING OPERATIONS

NOTE: Caution must be taken to prevent uncovered holes and other such hazards. If work is to be under a separate contract and subsequent filling is not required under the separate contract, arrangements must be made to have the filling done under this contract.

Do not begin excavation, filling, and other earth-moving operations that are sequential to demolition or deconstruction work in areas occupied by structures to be demolished or deconstructed until all demolition and deconstruction in the area has been completed and debris removed. Fill holes, open basements and other hazardous openings.

3.3 DISPOSITION OF MATERIAL

NOTE: This article entitled "Disposition of Material" and the paragraphs that follow are for all projects except as noted.

3.3.1 Title to Materials

NOTE: To minimize the possibility of contested ownership of materials or equipment in structures to be demolished or deconstructed, the following letter should be sent to the station sufficiently in advance of the date on which action is required, and the response thereto incorporated in either the project specifications or bidding documents. The Government will prepare this letter. For project prepared by an A/E, the A/E must notify the Government the need for this correspondence.

From: (Appropriate EDF Activity)

To: Commanding Officer, (Station)

Subj: Contract (Number) - [____]:
(Including [Demolition] [and] [Deconstruction] of

[(____)]

1. This activity is preparing the documents preliminary to advertising the subject contract for bids. A portion of this contract will be concerned with the ownership of the materials in the structure(s) and the contents of the building(s) to be [demolished] [and] [deconstructed]. It is normal practice to specify that the structures, and all equipment or other material inside the structures at the time the contract is advertised for bids, become the property of the Contractor.

2. Accordingly, it is requested that this activity be advised of the existence of any material or equipment within the limits of the contract which is to remain the property of the Government. A negative reply is requested. If there is any material or equipment in this category, it is requested that action be initiated to remove it from the limits of the contract. If prompt removal is impractical, it will be necessary for the station to make a complete inventory of, and tag or mark, each item which is to remain the property of the Government. A copy of the inventory, a description of the tag or mark used, and the desired disposition of the item must be forwarded to this activity for inclusion in the specification or bidding documents.

3. In the past, this activity has experienced considerable difficulty where a building evacuated prior to demolition or deconstruction is then used to store other material or equipment temporarily and the items were in storage during the bid advertising period. Upon award of the contract, the Contractor claimed the material and either removed it or claimed and was awarded compensation for it. Therefore, it is requested that the structure(s) to be demolished or deconstructed which are included in this contract not be used for temporary storage during the bid advertising period.

4. It is requested that the reply to this letter be sent to this activity not later than [60] [____] days after the date of this letter. Failure to do so may result in unnecessary cost to the Government in claims.

5. Insert name of contract and identify buildings(s) to be included under contract. Further revise as necessary to suit conditions.

Except for salvaged items specified in related Sections, and for materials or equipment scheduled for salvage, all materials and equipment removed and not reused or salvaged, become the property of the Contractor and must be removed from Government property. Materials approved for storage by the Contracting Officer must be removed before completion of the contract. Title to materials resulting from demolition and

deconstruction, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Showing for sale or selling materials and equipment on site is prohibited.

3.3.2 Reuse of Materials and Equipment

NOTE: Delete if inapplicable, or edit to suit individual requirements. Items to be salvaged must be described in adequate detail to establish the limits of the items involved. Requirements for preparation and disposition will be as required to meet job conditions.

Remove and store materials and equipment listed in the Demolition Plan to be reused or relocated to prevent damage, and reinstall as the work progresses. Coordinate the re-use of materials and equipment with the re-use requirements in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL. Capture re-use of materials in the diversion calculations for the project.

3.3.3 Salvaged Materials and Equipment

NOTE: Delete if inapplicable, or edit to suit individual requirements. Describe items to be salvaged in adequate detail to establish the limits of the items involved. Requirements for preparation and disposition will be as required to meet job conditions.

Remove materials and equipment that are listed in the Demolition Plan to be removed by the Contractor and that are to remain the property of the Government, and deliver to a storage site.

- a. Salvage items and material to the maximum extent possible.
- b. Store all materials salvaged for the Contractor as approved by the Contracting Officer and remove from Government property before completion of the contract. Coordinate the salvaged materials with tracking requirements in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL. Capture salvaged materials in the diversion calculations for the project.
- c. Remove salvaged items to remain the property of the Government in a manner to prevent damage, and packed or crated to protect the items from damage while in storage or during shipment. Items damaged during removal or storage must be repaired or replaced to match existing items. Properly identify the contents of containers.
- d. Remove historical items in a manner to prevent damage. Deliver the following historical items to the Government for disposition: Corner stones, contents of corner stones, and document boxes wherever located on the site.

3.3.3.1 Designation of Government Salvage, Unsalvageable Property, or Rubble

All fixtures desired by the Government for salvage shall be designated as "Government Salvage" in POF Form 88 attached to this section. All remaining materials and equipment not designated as salvage are "Unsalvageable Material" or "Rubble". Designation will be made by the Contracting Officer or Directorate of Public Works (DPW).

3.3.3.2 POF Form 88

In the case the completed POF Form 88 is not available before notice to proceed is issued to the Contractor, the Contractor upon receipt of notice to proceed is required to contact the Contracting Officer to have a joint inventory with Directorate of Public Works (DPW) or Base Civil Engineer (BCE).

3.3.4 Disposal of Ozone Depleting Substance (ODS)

Class I and Class II ODS are defined in Section, 602(a) and (b), of The Clean Air Act. Prevent discharge of Class I and Class II ODS to the atmosphere. Place recovered ODS in cylinders meeting [AHRI Guideline K](#) suitable for the type ODS (filled to no more than 80 percent capacity) and provide appropriate labeling. Recovered ODS must be Remove recovered ODS from Government property and dispose of in accordance with [40 CFR 82](#). Dispose products, equipment and appliances containing ODS in a sealed, self-contained system (e.g. residential refrigerators and window air conditioners) in accordance with [40 CFR 82](#). Submit [Receipts](#) or bills of lading, as specified. Submit a shipping receipt or bill of lading for all containers of ozone depleting substance (ODS) shipped to the DLA Gimcheon.

3.3.4.1 Special Instructions

No more than one type of ODS is permitted in each container. Apply a warning/hazardous label to the containers in accordance with Department of Transportation regulations. Provide a tag with the following information on all cylinders including but not limited to fire extinguishers, spheres, or canisters containing an ODS:

- a. Activity name and unit identification code
- b. Activity point of contact and phone number
- c. Type of ODS and pounds of ODS contained
- d. Date of shipment
- e. National stock number (for information, call (804) 279-4525).

3.3.4.2 Fire Suppression Containers

Deactivate fire suppression system cylinders and canisters with electrical charges or initiators prior to shipment. Also, safety caps must be used to cover exposed actuation mechanisms and discharge ports on these special cylinders.

3.3.5 Transportation Guidance

Ship all ODS containers in accordance with [MIL-STD-129](#), [DLA 4145.25](#) (also

referenced one of the following: Army Regulation 700-68, Naval Supply Instruction 4440.128C, Marine Corps Order 10330.2C, and Air Force Regulation 67-12), 49 CFR 173.301, and DOD 4000.25-1-M.

3.3.6 Unsalvageable and Non-Recyclable Material

Dispose of unsalvageable and non-recyclable combustible material outside the limits of the Government property (military installation) at the Contractor's responsibility and expense.

3.4 CLEANUP

Remove debris and rubbish from [basement] [project site] and similar excavations. Remove and transport the debris in a manner that prevents spillage on streets or adjacent areas. Apply local regulations regarding hauling and disposal.

3.5 DISPOSAL OF REMOVED MATERIALS

3.5.1 Regulation of Removed Materials

Dispose of debris, rubbish, scrap, and other nonsalvageable materials resulting from removal operations with ROK laws WMA Act, WMA PD, and WMA MD. Storage of removed materials on the project site is prohibited. Report on the Generated Waste of Disposal of Removed Materials thru Allbaro System linked to <http://www.wms-net.or.kr/index.jsp>

3.5.2 Burning on Government Property

Burning of materials removed from demolished and deconstructed structures will not be permitted on Government property.

3.5.3 Removal to Spoil Areas on Government Property

Transport noncombustible materials removed from demolition and deconstruction structures to designated spoil areas on Government property.

3.5.4 Removal from Government Property

Transport waste materials removed from demolished and deconstructed structures, except waste soil, from Government property for legal disposal. Dispose of waste soil as directed.

3.6 REUSE OF SALVAGED ITEMS

Recondition salvaged materials and equipment designated for reuse before installation. Replace items damaged during removal and salvage operations or restore them as necessary to usable condition.

-- End of Section --