

SPECIAL SPECIFICATION

SECTION 01505S

CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Owner has established that this Project shall include proactive measures for waste management participation by all parties to the contract.
- B. The purpose of this program is to ensure that during the course of the Project all diligent means are employed to pursue practical and economically feasible construction waste management and recycling options.
 - 1. Waste generation shall be minimized to the extent possible.
 - 2. Waste generation shall be avoided due to the following:
 - a. Over-packing
 - b. Improper storage
 - c. Poor planning, layout
 - d. Over ordering, ordering error
 - e. Breakage
 - f. Mishandling
 - g. Contamination
 - h. Damage from weather
 - 3. All diligent means shall be employed to pursue practical and economically feasible reuse, salvage and recycling (including donation of materials to charitable organizations) options for the inevitable waste generated during project activities.
 - 4. Waste disposal in landfills shall be minimized to the greatest extent possible.
- C. Waste Diversion Goals: the following shall be diverted from disposal in landfills:
 - 1. Minimum of 75% (by weight) of total project waste shall be diverted from landfill.

1.02 DEFINITIONS

- A. Waste: large and small pieces of the materials indicated which are excess to the contract requirements and generally include materials which are to be salvaged from existing construction and items of trimmings, cuttings and damaged goods resulting from new installations, which can not be effectively used in the Work.
- B. Construction waste: Solid wastes including, but not limited to, building materials, packaging materials, debris and trash resulting from construction operations.
- C. Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.
- D. Hazardous waste: Any material or byproduct of construction that is regulated by the Environmental Protection Agency and that may not be disposed in any landfill or other waste end-source without adherence to applicable laws. (See special specification 01065-S, 1.12 H, ES&H for MESA construction projects.)
- E. Trash: Any product or material unable to be returned, reused, recycled or salvaged.
- F. Landfill: Any public or private business involved in the practice of trash disposal.
- G. Waste Management Plan: A Project-related plan for the collection, transportation, and dispensation of waste generated at the construction site.

1.03 SUMMARY

- A. This Section includes required salvage and recycling of the following waste materials and applies to all such listed waste materials produced during the course of this Contract:
 - 1. Land Clearing Debris: Solid waste generated solely from land clearing operations, such as stumps and trees.
 - a. See Division 2 "Site Clearing" section for requirements for salvage and processing of designated materials to produce mulch for use in landscape construction for this project. Material required for production of landscape mulch is not classified as "land clearing debris."
 - 2. Concrete, Masonry, and Other Inert Fill Material: Concrete, brick, rock, clean soil not intended for other on-site use, broken up asphalt pavement containing no ABC stone, clay, concrete, or other contaminants, and other inert material.
 - 3. Metals: Metal scrap including iron, steel, copper, brass, and aluminum.
 - 4. Untreated Wood: Unpainted, untreated dimensional lumber, plywood, oriented strand board, masonite, particleboard, and wood shipping pallets.
 - 5. Gypsum Wallboard Scrap: Excess drywall construction materials including cuttings, other scrap, and excess materials.
 - 6. Salvaged Materials: Reusable lumber, fixtures, and building supplies

7. Cardboard: Clean, corrugated cardboard such as used for packaging, etc.
8. Paper: Discarded office refuse such as unwanted files, correspondence, etc.
9. Plastic Buckets: Containers for various liquid and semi-solid or viscous construction materials and compounds.
10. Beverage Containers: Aluminum, glass, and plastic containers.
11. Other Mixed Construction and Demolition Waste: Solid waste resulting solely from construction, remodeling, repair, or demolition operations on pavement, buildings, or other structures exclusive of waste materials listed herewith.
12. Non-Recyclable Waste: Collect and segregate non-recyclable waste for delivery to a permitted landfill site.
13. Mixed Solid Waste: Solid waste usually collected as a municipal service, exclusive of waste materials listed above.
14. Hazardous Waste: Control and disposal of hazardous waste is specified in Division 1 "Environmental Protection" section. **(See special specification Section 01065 1.12 Environment, Safety, and Health for MESA construction contracts.**

1.04 SUBMITTALS

- A. The Plan shall follow the annotated outline provided in Attachment A of this Section and include the following:
 1. Analysis of waste material types to be generated and quantities of each type.
 2. List of waste materials proposed to be salvaged, reused, or recycled during the project.
 3. Identification of destination for each waste material type including requirements for transportation and acceptance by the designated facilities.
 4. Detailed description of material handling procedures including on-site collection/storage locations, separation methods and containers, and protection of recyclable materials.
 5. List of waste materials not reusable, recyclable, or otherwise conservable that must be disposed of in a landfill or other means acceptable under governing State and local regulations.
 6. Identification of permitted landfills and other disposal means to be employed.
 7. Indication of compliance with regulations specified under "Quality Assurance" article below.
 8. Identification of instances where compliance with the requirements of this specification is not possible.

9. Identification of Construction Waste Management meetings to be conducted.
 10. Identification of measures to avoid or prevent generation of waste materials
- B. Construction Waste Management Plan Implementation:
1. The Contractor shall designate an on-site party, herein referred to as "Recycling Contractor" to instruct workers, oversee and document the Waste Management Plan.
- C. The "Summary of Construction Waste/Recycling" shall be completed each month as part of the *Materials Log Submittal*, referred to in section 01300, and submitted as part of Application For Payment. The summary will also be submitted at project-closeout. These reports will contain, in table format, each and all waste type, the disposition path (recycled, reused, or disposed) and weight of each disposition path, recycling certifications, manifests, receipts, weight tickets, and any other pertinent records.
1. Recycling Contractor shall distribute copies of the "Summary of Construction Waste/Recycling" to the Contractor, Owner and Architect.
 2. Recycling Contractor shall provide on-site instruction to Contractor and subcontractors regarding appropriate protocol for recycling operations.
 3. Collection Facilities:
 - a. Containers are to be maintained in an orderly manner and clearly marked to avoid contamination of materials identified as hazardous, organic or biological waste.
 4. Hazardous wastes:
 - a. Hazardous wastes shall be separated, stored and disposed of in accordance with local and EPA regulations. Store in secure area.
 5. The "Summary of Construction Waste/Recycling" shall include a Waste Material Estimating Worksheet as provided in Attachment B of this Section and a Waste Material Diversion Worksheet as provided in Attachment C of this Section.

1.05 QUALITY ASSURANCE:

- A. Regulatory Requirements: Comply with all applicable requirements of State of New Mexico concerning management of construction, demolition, land clearing, inert, and yard trash debris and any and all subsequent modifications and amendments to same. **(See special specification Section 01065-S, 1.12, ES&H for MESA construction Contracts).**
1. Comply with 20 NMAC 9.1, Solid Waste Management
 2. Comply with 20 NMAC 4.1, Hazardous Waste Management
 3. Comply with 20 NMAC 3.1, Radioactive Materials and Machines

4. DOE Orders require waste to be managed according to the following hierarchy: prevention, recycling and reuse, treatment, compliant disposal.
 5. Comply with Disposal Sites, Recyclers, and Waste Materials Processors: Use only facilities properly permitted by the State of New Mexico, and by local authorities where applicable.
- B. Pre-Construction Waste Management Conference: Prior to beginning work at the site, schedule and conduct a conference to review the Construction Waste Management Plan and discuss procedures, schedules and specific requirements for waste materials recycling and disposal. Discuss coordination and interface between the Contractor and other construction activities. Identify and resolve problems with compliance with requirements. Record minutes of the meeting, identifying all conclusions reached and matters requiring further resolution.
1. Conference Attendees: The Contractor, the 'Recycling Contractor' and related Contractor personnel associated with the work of this section, including personnel to be in charge of the waste management program; the Construction Quality Manager; the Contracting Officer; the Contracting officer's Representative; and such additional Government personnel as the Contracting Officer deems appropriate. At a minimum, waste management goals and implementation issues will be discussed at the following meetings:
 - a. Pre-bid meeting
 - b. Pre-Construction meeting.
 - c. Regular job-site meetings.
 2. Plan Revision: Make any revisions to the Construction Waste Management Plan agreed upon during the meeting and incorporate resolutions agreed to be made subsequent to the meeting. Submit the revised plan to the Contracting Officer's Representative for approval.
- C. Implementation: Designate an on-site party responsible for instructing workers and implementing the Construction Waste Management Plan. Distribute copies of the Construction Waste Management Plan to the job site foreman and each subcontractor. Include waste management and recycling in worker orientation. Provide on-site instruction on appropriate separation, handling, recycling, and salvaging methods to be used by all parties at the appropriate stages of the work at the site. Include waste management and recycling discussion in pre-fabrication meetings with subcontractors and fabricators. Also include discussion of waste management and recycling in regular job meetings and job safety meetings conducted during the course of work at the site.

1.06 STORAGE AND HANDLING:

- A. Site Storage: Remove all indicated recyclable materials from the work location to approved containers daily. Failure to remove waste materials will be considered cause for withholding payment and termination of Contract
- B. Position covered containers for recyclable waste materials at a designated location on the Project Site. Select a location for the recyclable materials containers

separated from that of general waste and rubbish containers. Provide separate collection containers for a minimum of the following materials:

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| 1. Land clearing debris | 9. Metals |
| 2. Clean dimensional wood, palette wood | 10. Gypsum Drywall (unpainted) |
| 3. Plywood, OSB, and particle board | 11. Paint |
| 4. Concrete | 12. Rigid Foam |
| 5. Bricks | 13. Glass |
| 6. Concrete Masonry Units (CMU) | 14. Plastics |
| 7. Asphaltic Concrete | 15. Carpet and pad |
| 8. Cardboard, paper | 16. Beverage Containers |
| | 17. Insulation |

- C. Change out loaded containers for empty ones as demand requires, but not less than weekly.
- D. Handling: Deposit all indicated recyclable materials in the containers in a clean (no mud, adhesives, solvents, petroleum contamination), debris-free condition. Do not deposit contaminated materials into the containers until such materials have been cleaned.
- E. If the contamination chemically combines with the material so that it cannot be cleaned, do not deposit into the recycle containers. In such case, request resolution by the Construction Quality Manager as to disposal of the contaminated material. Directions from the Construction Quality Manager do not relieve the Contractor from compliance with all legal and regulatory requirements for disposal, nor shall such directions cause a request for modification of the Contract.

1.07 PROJECT/SITE CONDITIONS:

- A. Environmental Requirements: Transport recyclable waste materials from the Work Area to the recycle containers and carefully deposit in the containers without excess noise and interference with other activities, in a manner to minimize noise and dust. Re-close container covers immediately after materials are deposited.
 - 1. Do not place recyclable waste materials on the ground adjacent to a container.
- B. Existing Conditions: Coordinate with "Instructions to Bidders" and "Supplementary Conditions".

PART 2 - PRODUCTS

2.01 RESOURCES

- A. Guides: The following resources provide information on agencies and businesses in the reuse, recycle, and salvage business community.
1. New Mexico Recycling Coalition:
www.nmrecycle.org
(505) 983-4470
 2. Southwest Public Recycling Association:
www.spra-recycling.org
(505) 983-4470
 3. New Mexico Environment Department, Solid Waste Bureau:
www.nmenv.state.nm.us
(505) 827-2775
 4. City of Albuquerque, Solid Waste Management
www.cabq.gov/solidwaste/recycle.html
(505) 761-8100
- B. SNL/NM On-Site Resources: The following list identifies reuse, recycle and salvage capabilities available on site at SNL/NM. Use of on-site SNL resources shall be coordinated through the SDR.
1. Property Reapplication: Accepts material and equipment such as scrap metal, fencing, building components, light fixtures, refrigeration units, HVAC system components, and generally anything that has value or could be reused or recycled economically.
 2. Hazardous Waste Management Facility: Accepts certain regulated wastes for recycling such as florescent lights, oil, ballasts, batteries, and other regulated wastes for disposal.
 3. Kirtland Landfill: Accepts clean concrete for reuse in erosion control and general construction & demolition waste for disposal.
 4. SNL Solid Waste Transfer Station: Accepts paper, plastic, and cardboard for recycling.
 5. Miscellaneous: Other on-site SNL/NM resources include clean soil reuse, carpet and ceiling tile recycling.

PART 3 - EXECUTION

3.01 WASTE MANAGEMENT:

- A. General: Implement waste management procedures in accordance with approved construction waste management plan. Maintain procedure throughout the life of this Contract.

- B. Source Separation: Separate, store, protect, and handle at the project site all identified recyclable and salvageable waste products to prevent contamination of materials and maximize recyclability and salvageability of materials.
- C. Arrange for the regular collection, transport from the site, and delivery to respective approved recycling centers of indicated recyclable waste materials. Maintain records accessible to the Contracting Officer's Representative for verification of construction waste materials recycling.
- D. Delivery Receipts: Arrange for timely pickups from the site or deliveries to approved recycling facilities of designated waste materials to keep construction site clear and prevent contamination of recyclable materials. Keep and maintain records of all deliveries to recycling facilities and all pickups of waste materials at the site by others as specified above.

3.02 RECYCLABLE WASTE MATERIALS HANDLING:

- A. General: The following paragraphs supplement handling requirements for various of the materials identified for classification and recycling listed in Part 1 "Summary" article above.
- B. Paper: Classify and handle waste paper goods as follows:
 - 1. Bond Paper: As generally found in the construction offices and used for specifications, correspondence, copiers, PC laser printers and FAX machines. Collect in a separate container at each workstation and deposit loose in the appropriate recycle container daily.
 - 2. Newsprint: Newspapers and tabloid style advertising (slick finish magazines and advertising materials are not typically recyclable). Collect in a single location and deposit daily in the appropriate recycle container.
 - 3. Diazo Prints (drawings): Set up a single location for collection. Roll together to minimize space. Deposit daily in the appropriate recycle container.
- C. Packaging materials:
 - 1. Cardboard and paperboard cartons and boxes: Knock down, fold flat and deposit in the appropriate recycle container.
 - 2. Paper packing materials (separators, stiffeners, etc.) shall be placed in the same container.
 - 3. Newsprint, used as packing (shredded or whole), shall be deposited in the recyclable container for newsprint.
 - 4. Plastic (polystyrene peanuts and other shapes) shall be deposited in the recyclable container for plastics.
 - 5. Metal and plastic banding materials shall be deposited in the appropriate container.

- D. Metals: Cut all items to lengths and sizes to fit within the container provided, when necessary. Where there is sufficient quantity of a specific recyclable waste item (for example; salvaged metal roofing or duct work), make special arrangements for items to be bundled, banded or tied, and stack in a designated location for a special pick-up. Coordinate all special arrangements with the Construction Quality Manager.
- E. Plastics: Collect recyclable plastics (polystyrene and others specifically marked for recycling) daily from work areas and deposit in designated containers.
- F. Glass: Remove waste glass products (sheet, bottles, etc.) daily from the work area and deposit in designated containers. Where glass containers are marked for separation by color or type, segregate glass accordingly. Glass containing imbedded wire (typical in some fire rated doors having glazed lights) is usually not reprocessed; verify with the Construction Quality Manager that wire glass is not recyclable.
- G. Gypsum Wallboard: Separate gypsum wallboard from other wastes. Dispose of waste gypsum wallboard off-site at a gypsum reclamation or recycling facility if available, or grind on-site as a soil amendment.
 - 1. For on-site application as a soil amendment, incorporate waste gypsum wallboard in landscape areas under construction, at a rate of 50 pounds per 1000 square feet, or approximately one ton per acre.
 - 2. Material must be unpainted gypsum wallboard from new construction, ground to reduce material to a fine particle size (70% passing a 100 mesh screen), and must be fully incorporated into the soil surface.
 - 3. The above specified application rate may be increased if a soil analysis is reviewed by, and approval granted from the New Mexico Environment Department.
- H. Other Items: Where recyclability classification of any given waste material is unclear, verify with Construction Quality Manager.

END OF SECTION