SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Section includes: Special administrative and procedural requirements and procedures as required for the Project waste management and recycling activities and as described herein.

1. Recycling goals and waste management program intent.
2. List of recyclable materials.
3. Waste management plan.
4. Waste management plan implementation.
5. Waste management reporting.

1.2 RELATED SECTIONS

A. Section 01 60 00 PRODUCT REQUIREMENTS

1. Requirements for recycling packaging materials.
2. Product conservation, reuse and waste management.

B. Section 01 73 00 EXECUTION:

1. Waste Management and Recycling during Final Cleaning.

1.3 RECYCLING GOALS AND WASTE MANAGEMENT PROGRAM INTENT

A. Program Goal: It is the Owner’s determination that this Project shall generate the least amount of construction waste possible. This program goal shall be accomplished by the following processes:

B. Program Goal: It is the Owner’s determination that this Project shall generate the least amount of construction waste possible. The Owner's goal is to salvage and recycle as much non-hazardous demolition and construction waste as possible (**minimum 75% waste diversion**). This program goal shall be accomplished by the following processes:

1. Efficiently use demolition waste materials to the maximum extent as economically feasible:
   a. Reuse and renovation of existing structures in lieu of demolition as shown in the Contract Documents.
   b. Segregate and salvage existing materials and items for salvage and reuse on site where possible.
   c. Segregate demolished materials for salvage and recycling, or to be recycled as mixed debris.
2. Ensure the reduction of waste generated due to errors, poor planning, breakage, mishandling, contamination, or other factors shall be employed.
3. Efficiently use waste material to the fullest extent possible in the completion of this Project, including the following.
   a. Reuse of materials on site where possible.
   b. Recycling of waste generated during the construction processes.
4. The Contractor is encouraged to include additional resource efficient methods in the Project.
5. In the management of waste consideration shall be given to 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.

C. Contractor Participation: The Contractor shall 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.

1. The Contractor is responsible for implementation of special programs involving rebates or similar incentives related to recycling of waste.
2. Revenues or other savings obtained for salvage, or recycling shall accrue to the Contractor. Firms and facilities used for recycling, reuse, and disposal shall be appropriately permitted for the intended use to the extent required by federal, state, and local regulations.

D. Waste disposal: In no case shall material be disposed of in a landfill or incinerator where an approved and less costly recycling or reuse alternative exists. Waste disposal in landfills and incinerators shall be minimized and shall be considered the alternative of last resort.

1.4 DEFINITIONS

A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

1. Construction and demolition waste includes excess or otherwise unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work.

C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitability, corrosiveness, toxicity or reactivity.

D. Non-hazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitability, corrosiveness, toxicity, or reactivity.

E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.

F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

G. Recycle: To remove a waste material from the Project site to another site for remanufacture into a new product for reuse by others.

H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.

I. Return: To give back reusable items or unused products to vendors for credit.

J. Reuse: To reuse a construction waste material in some manner on the Project site.

K. Salvage: To remove a waste material from the Project site to another site for resale or reuse by others.

L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.

M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.

O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

P. Volatile Organic Compounds (VOCs): Chemical compounds common in and emitted by many building products over time through outgassing: solvents in paints and other coatings; wood preservatives; strippers and household cleaners; adhesives in particleboard, fiberboard, and some plywoods; and foam insulation.

Q. Waste Management Plan: A Project -related plan for the collection, transportation, and disposal of the waste generated at the construction site. The purpose of the plan is to ultimately reduce the amount of material being landfilled.

R. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

1.5 LIST OF RECYCLABLE MATERIALS

A. Materials to be recycled, salvaged, or reused during this project include, but are not limited to, the following:

1. Beverage Containers
2. Carpet and carpet pad trim
3. Concrete, concrete block, concrete masonry units (CMU), slump stone (decorative concrete block), and rocks
4. Fluorescent light tubes, per local regulatory requirements.
5. Furnishings
6. Glass
7. Green materials (i.e. tree trimmings and land clearing debris).
8. Gypsum wallboard
9. Insulation
10. Metals including, but not limited to, stud trim, ductwork, piping, reinforcing steel (rebar), roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze. (ferrous and non -ferrous).
11. Paint
12. Paper, including bond, newsprint, cardboard, mixed paper, packing materials, and packaging
13. Plastics, plastic buckets and plastic sheeting.
14. Porcelain plumbing fixtures
15. Rigid foam insulation and packing materials.
16. Wood, including clean dimensional wood, pallet wood, plywood, oriented strand board (OSB), particle board

1.6 WASTE MANAGEMENT PLAN

A. Draft Waste Management Plan: Within 14 calendar days after receipt of Notice of Award of Bid, and prior to any waste removal, the Contractor shall submit a Draft Waste Management Plan to both Architect and Owner. The Draft Waste Management Plan shall include as a minimum the following:

1. Analysis of the jobsite waste expected to be generated, categorized by material types and approximate quantities.
    a. List waste materials that will be salvaged for resale, salvaged and reused, or recycled.
2. Disposal options: The name of all landfills and incinerators proposed for trash disposal, the respective tipping fees for each of these disposal options including transportation costs, and the projected cost of disposing of all Project waste in the landfills.
3. Alternatives to Incineration or Landfill Disposal: A list of each material proposed to be salvaged, reused, or recycled during the course of the Project. Include the following information:
    a. The proposed end use or market for each material.

b. The respective tipping fees for each end use or market (including transportation costs).
c. The estimated net cost savings or additional costs resulting from separating and recycling each material (versus landfilling or other disposal).
    1) "Net" means that the following have been subtracted from t he cost of separating and recycling: (a) revenue from the sale of recycled or salvaged materials and (b) landfill tipping fees saved due to diversion of materials from the landfill.

B. Final Waste Management Plan: Once the Owner has reviewed the draft Waste Management Plan and made appropriate suggested modifications, the Contractor shall submit, within 14 calendar days of receiving such suggested modifications, a Final Waste Management Plan, incorporating Owner's input. The Final Waste Management Plan shall contain the following:

1. Analysis of the jobsite waste expected to be generated, categorized by material types and approximate quantities.
    a. List specific waste materials that will be salvaged for resale, salvaged and reused, or recycled.
2. Materials Handling Procedures: A description of the means by which any waste materials identified to be salvaged, reused, or recycled, will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
3. Markets: A list of the markets or other on -site or off -site end uses that will be used for each material that will be separated for reuse, salvage, or recycling.
    a. Identify (and utilize) 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.
4. Transportation: Describe the means of transportation of the recyclable materials and destination of all waste materials.
    a. Transported materials include:
        1) Materials that will be site-separated and hauled to designated centers
        2) Mixed materials will be collected by a waste hauler and removed from the site).
        3) Mixed materials that will be removed from site and later separated for recycling.
5. Disposal options: The name of all landfills and incinerators proposed for trash disposal, the respective tipping fees for each of these disposal options including transportation costs, and the projected cost of disposing of all Project waste in the landfill(s).
    a. Alternatives to Incineration or Landfill Disposal: A list of each material proposed to be salvaged, reused, or recycled during the course of the Project.
6. Cost of Reuse, Salvage, or Recycling. An estimate of the cost, including separation, transportation, and marketing, to reuse, salvage, or recycle the materials identified.
7. Schedule of special meetings to required to address waste management implementation.

1.7 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: The Contractor shall designate a specific party (or parties) responsible for instructing workers in recycling and overseeing and documenting results of the Waste Management Plan for the Project.

B. Distribution: The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner, and the Architect.

C. Instruction: The Contractor or his designated waste manager shall provide on -site instruction regarding appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all involved parties at the appropriate stages of the Project.

D. Separation facilities: As appropriate during each stage of the Project, the Contractor shall lay out and label a specific area(s) to facilitate separation of materials for potential recycling,

salvage, reuse, and return Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.

E. Hazardous wastes: Hazardous wastes shall be separated, stored, and disposed of according to local regulations.

1.8 WASTE MANAGEMENT REPORTING

A. Application for Progress Payments: The Contractor shall submit with each Application for Progress Payment a Summary of Waste generated by the Project. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The Summary shall be submitted on a form acceptable to the Owner and shall contain the following information:

1. The amount (in tons or cubic yards) of material landfilled from the Project, the identity of the landfill, the total amount of tipping fees paid, transportation costs (if separate) and the total disposal cost. Include manifests, weight tickets, receipt, and invoices.
2. For each material recycled, reused, or salvaged from the Project, the amount (in tons or cubic yards), the date removed from the jobsite, the receiving party, the transportation cost, the amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling each material. Attach manifests, weight tickets, receipts, and invoices.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 GENERAL WASTE MANAGEMENT

A. Use detailed material estimates to reduce risk of unplanned and potentially wasteful cuts.

B. Arrange for vendors and material suppliers is to take back shipping and packing materials for re -use or recycling to the maximum extent economically feasible.

1. Include in material purchasing agreements a waste reduction provision requesting that materials and equipment be delivered in packaging made of recyclable material, that they reduce the amount of packaging, that packaging be taken back for reuse or recycling, and to take back all unused product. Insure that subcontractors require the same provisions in their purchase agreements.

C. Provide clearly labeled containers for recycled waste that is to be recycled, with a list of acceptable and unacceptable materials. The list of acceptable materials must be the same as the materials recycled at the receiving material recovery facility or recycling processor.

1. Separate corrugated cardboard in accordance with the Waste Management Plan and place in designated areas for recycling.
2. Separate and recycle waste materials in accordance with the Waste Management Plan and to the maximum extent economically feasible.
3. Place materials defined as hazardous or toxic waste in designated containers.

D. Provide labeled containers for all recycled waste that is to be disposed in a landfill.

E. Handle and transport recyclable materials in manner to prevent contamination of materials from incompatible products and materials.

F. Conduct regular visual inspections of dumpsters and recycling bins to remove contaminants.

3.2 SOURCE SEPARATION

A. General: Separate recyclable materials from general construction waste. Separate recyclable materials by type.

1. Provide containers, clearly labeled, by type of separated materials or provide other storage method for managing recyclable materials until they are removed from Project site.
2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from demolition area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from weather.

B. Source Separation Methods:

1. Waste products and materials that are recyclable shall be separated from trash and sorted into appropriately marked separate containers and then transported to t he respective recycling facility for further processing.
2. Co-Mingled Method: Recyclable materials shall be placed into a single container and then transported to a recycling facility where the recyclable materials are sorted and processed.
   a. Do not put recycled waste that will be disposed in a landfill into a co -mingled waste recycling container.
3. Other Methods: Other methods proposed by the Contractor may be used when approved by the Architect and Owner.

C. Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling whenever economically feasible.

3.3 REMOVAL OF CONSTRUCTION AND DEMOLITION WASTE MATERIALS

A. Remove recycled waste materials from project site on a regular basis. Do not allow recycled waste to accumulate on -site.

B. Transport recycled waste materials off Owner's property and legally dispose of them.

1. Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.

END OF SECTION