

PUBLIC BUILDING COMMISSION OF CHICAGO

ADDENDUM NO. 05 TO CONTRACT NO. 1517
For

**Michael Reese Hospital Campus
2929 South Ellis Avenue
Demolition and Asbestos Abatement
Project # 04100**

DATE: October 18, 2010

NOTICE OF CHANGES IN CONTRACT DOCUMENTS

The following changes are hereby made in the Contract Documents.

Changes To Book 1 – PROJECT INFORMATION, INSTRUCTIONS TO BIDDERS AND EXECUTION DOCUMENTS:

Change 1: Insert: F. Liquidated Damages-Section II. PROJECT INFORMATION

1. The Contractor agrees that the Work must be executed regularly and diligently to ensure completion within the time specified in Paragraph B above. The Contractor and the Commission understand and agree that the time for the completion of the Work described herein is reasonable time. If the Contractor neglects, fails or refuses to complete the Work within the time specified, or any proper extension granted by the Commission, then the Contractor and its surety do hereby agree to pay to the Commission the amount of:

Substantial Completion of Project 75 days from the notice to proceed. Full completion in 95 days.	\$500.00 per Day after full completion.
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not as a penalty but as liquidated damages for the breach of contract occurring each and every Day that the Contractor after the time stipulated in the Contract for completing the Work.

2. The Commission may recover liquidated damages by deducting the amount out of any monies due or that may become due the Contractor. Liquidated damages, if any, will be calculated on completion of the Work and submission of the Contractor's final pay request.
3. Substantial Completion of the Work is defined in Book 2, Section 1.01.30.

Change 2. SECTION III INSTRUCTIONS FOR BIDDERS, Item V. Award of Contract: Rejection of Bids, Page 11, # 2.

Delete: The Bidder Agrees that its bid shall be in effect until midnight, Tuesday, September 21, 2010 and that the bid may not be withdrawn until that time.

Replace to read as: The Bidder Agrees that its bid shall be in effect until midnight, Tuesday, January 21, 2011 and that the bid may not be withdrawn until that time.

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Changes to Book 2A STANDARD TERMS AND CONDITIONS PROCEDURES MANUAL:

Change 1: Delete in its entirety, Specification Section 01740 - Warranties

Changes to Book 3: TECHNICAL SPECIFICATIONS:

Change 2: INSERT Section 01524 – Construction Waste Management (see attached).

Change 3: Section 02061 – Building Demolition

a. INSERT: Paragraph D to Article 3.2. Building Demolition

D. Contractor will be required to demolish the parking structure while the PBC site field office is in its present location without damage to the office. Contractor is responsible for the cost of repairs and any damage to the office and utility services.

1. Water Service: The Contractor shall be responsible for providing all temporary water and sewer services necessary to complete the work. Contractor shall arrange with the Department of Water Management for all water and sewer disconnects and arrange for metering and connections for any water or sewer service needed for the Work. Contractor shall arrange with the Department of Water Management for any site dewatering required and shall obtain all necessary discharge and/or pumping permits from MWRB, DWM or any other agency having jurisdiction over the project prior to connection or discharge of any site water or storm water run-off.

b. DELETE: Paragraph 3.4.E.3 in its entirety.

c. INSERT: Paragraph E to Article 3.2 Building Demolition

E. Vibration monitoring is to be provided by the Contractor and the Contractor is required to coordinate with neighboring property owners for placement of monitoring equipment. Monitoring to be completed during all working hours and shall begin one hour before and one hour after the work shift. Provide daily vibration monitoring reports to commission representative.

d. REVISE: Paragraph D under 3.4 Filling Basement and Voids to read as below.

D. Contractor is responsible for all concrete crushing operations and all work must be conducted in group F. Crushing will be allowed in the area on the East side of the building or parking structure. The contractor is required to re-grade the site to pre-demolition conditions where crushing and materials are stored in group F; seed or sod replacement is not required. The Contractor is responsible for placing the crushed concrete (CA-6) in the basement of the demolished buildings within the designated group per below referenced specifications. Use satisfactory soil materials consisting of stone, gravel, and sand, free from debris, trash, frozen materials, roots and other organic matter. The Contractor is responsible for all costs related to the import and placement of fill material. Excess material will be located to another area on-site at the Contractor's expense, location of excess material to be determined by the commission representative.

e. INSERT: Paragraph 3 to Article 3.4.D. Filling Basement and Voids.

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- 3. Brick material contained in the building is allowed to be crushed and used as fill material.

Change 4: Section 02089 – Hazardous, PCB and Universal Waste Management

- a. DELETE the current table titled "Building 22: Parking Garage, Summary of Hazardous and Potentially Hazardous Material" in Article 3.10 Scope Sheets and INSERT the following:

Building 22: Parking Garage
Summary of Hazardous and Potentially Hazardous Material

Table with 5 columns: Category, Item, Approximate Quantity, Units, Sample Number. Rows include PCBs, Mercury, Chemicals, Refrigerants/CFCs, Large Equipment, Solvent, Oils, Waste Oil, and Oils.

Notes: The analytical results are attached. Stained concrete associated with the solvent, oil and waste oil drums shall be segregated from clean concrete and removed from the site and disposed as contaminated material. No stained concrete shall be crushed and used as backfill on the site.

Change 5: Section 02135 – Asbestos Abatement

- a. DELETE: Paragraph 3.1.A.11.e in its entirety.
b. DELETE: Paragraph 3.1.E.9: in its entirety.
c. INSERT Paragraph 3.4.B.

B. Alternate (Non-Friable) Flooring Abatement Procedures are as follows:

- 1. Perform an Exposure Assessment in accordance with OSHA regulations. The assessment must be based on current or historical air monitoring data, and must constitute a Negative Exposure Assessment (NEA). That is, work may only be performed under this section if the NEA indicates that the airborne asbestos fiber concentrations will be below the OSHA Permissible Exposure Limit (PEL).
2. Submit the appropriate notification to the any state or local government agency prior to the beginning of all asbestos resilient floor-covering projects,

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as required. Courtesy notices should be sent so that work procedures can be changed to friable methods should the condition of the floor tile warrant. Post signs so that the work area cannot be entered from any direction without observing a sign.

- 3. Contractor shall determine what personal protection, if any, is required to comply with EPA and OSHA regulations, based on exposure assessments data (current or historical air monitoring), including but not limited to, respiratory protection and disposable suits.*
- 4. Personal air monitoring will be performed by the contractor in accordance with OSHA regulations.*
- 5. Isolate the work area from adjacent areas to remain occupied with appropriate barriers to prevent unauthorized entry. This may be a locked door, barricade, or other suitable arrangement.*
- 6. Establish a remote decontamination unit for use during non-friable abatement. Use the double suit method to decontaminate and move workers from the work area to the remote decontamination unit.*
- 7. Remove floor covering without causing breakage. Tiles must be removed in as intact a state as possible. If breakage occurs, contractor must stop work, modify its work methods, or choose a different method to prevent breakage. If breakage cannot be prevented, work must stop until a ten working day notice is filed, and may not resume until project design, full containment, hygiene, and personal protection practices described elsewhere in this specification are established.*
- 8. All removal machine operators shall be appropriately trained in accordance with manufacturers' directions. Some removal machines produce enough heat that, if misused, have the ability to reach the ignition temperature of flooring materials, asphaltic mastic, and wood or composition substrates. Whenever a heat source is used, contractor shall provide appropriate fire prevention measures, including sufficient fire extinguishing equipment and fire-watch. Removal machines shall never be left unattended unless they are disconnected from the power source and are cool enough to touch.*
- 9. Mastic Removal. When residual mastic is removed, contractor shall use mechanical methods or appropriate solvents to remove the mastic residue. When solvents are used, non-toxic, low odor, non-flammable solvents are required. Solvents with strong odors, or that are flammable or toxic, may require containment, controlled negative pressure ventilation, protective suits, or respirators to protect workers and building occupants.*
- 10. HEPA vacuum the work area thoroughly following completion of the removal.*
- 11. Final clearance tests may be performed by the Commission at the completion of the removal. Clearance shall follow section 1.3.C.4.*

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Change 6: Section 02064 - Soil Handling and Disposal

a. INSERT Paragraph h into Article 1.1.C.1. Summary.

h. Soils contained in group F cannot be relocated offsite without commission representative approval.

Changes to Drawings: Issued for Pricing Revise 8/5/2010

Change 7: Drawing Sheet A-002.22

a. DELETE: Note 1.m on sheet A-002.22 in its entirety.

QUESTIONS & ANSWERS:

Q/A 1. Q: Will there be any removal or installation of tanks for Michael Reese Hospital?

A. The known report data does not indicate any UST's on site. The specifications are included in the bid documents for the contractor to follow if a UST is located during demolition.

Q/A 2. Q: How will dust control be addressed? With a dust screen from the ground to 8ft above the structure, from 8ft above the top of the structure or with the wetting process?

A. Dust screen will not be required; however, the contractor is required to follow all Environment Ordinances and regulations.

Q/A 3. Q: 1) With the new City of Chicago ordinance for storm water management, will a special permit will be required? How will the engineering for this permit be handled? 2) Is there an existing storm water plan in place that we can just adhere to? 3) There will be a fee associated with this permit who is responsible for this cost? 4) Costs associated with the implementation of this plan cannot be determined prior to the bid date. How will these costs be handled?

A. PBC will obtain the required Storm Water detention drawings that are required for demolition permit. The costs associated with the Storm Water management permit will be the responsibility of PBC. No storm water management scope of work will be included in the issued for bid documents. If any storm water management scope of work is required by the City of Chicago the PBC will issue the storm water management plan as a Bulletin after contract award.

Q/A 4. Q: Are all permit fees waived?

A. Permit fee waivers only apply to the demolition permit, the contractor is responsible for all other permits cost that are required to perform their work required.

Q/A 5. Q: At the stairway to the elevator pit do we remove the walls and stairs all the way down to the top of footing or do we remove to a certain design elevation?

A. Remove the walls down to the top of footings and remove all footings as required in Book 3 TECHNICAL SPECIFICATIONS Section 02061.

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List of Attachments:

- Attachment 1.** Section 01352 – LEED Requirements, Book 3: TECHNICAL SPECIFICATIONS
- Attachment 2.** Section 01524 – Construction Waste Management, Book 3: TECHNICAL SPECIFICATIONS
- Attachment 3.** Analytical Results for Oil Drums
- Attachment 4.** Drawing Sheets: ENV-001 dated 08/02/2010; A-002.22 dated 08/23/2010; AD-01 dated 08/23/2010

END OF ADDENDUM NO.5

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SECTION 01352 - LEED REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general requirements and procedures for compliance with certain USGBC LEED prerequisites and credits needed for Project to obtain LEED Silver certification based on LEED-NC, Version 2.2.
- B. Related Sections:
 - 02062 UNDERGROUND STORAGE AND TANK REMOVAL
 - 02318 ACCEPTABLE FILL
- C. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
- D. LEED: Leadership in Energy & Environmental Design.
- E. Rapidly Renewable Materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.
- F. Regional Materials: Materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.
- G. Recycled Content: The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.
 - 1. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.
 - 2. "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

1.2 SUBMITTALS

- A. General: Submit additional LEED submittals required by other Specification Sections.
- B. LEED submittals are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated LEED requirements.
- C. Project Materials Cost Data: Provide statement indicating total cost for building materials used for Project, excluding mechanical, electrical, and plumbing components, and specialty items such as elevators and equipment. Include statement indicating total cost for wood-based materials used for Project.
- D. LEED Action Plans: Provide preliminary submittals within seven days of date established for the Notice of Award indicating how the following requirements will be met:
 - 1. Prerequisite to SS P1: Provide sediment and erosion control plan, specific to the site, that complies with the construction activities requirements listed in Phase I and Phase II of the National Pollutant Discharge Elimination System (NPDES) program or local requirement where more restrictive.

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2. Credit MR 2.1 and Credit MR 2.2: Waste management plan complying with Division 1 Section "Construction Waste Management."
 3. Credit MR 4.1 and Credit MR 4.2: List of proposed materials with recycled content. Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.
 4. Credit MR 5.1 and Credit MR 5.2: List of proposed regional materials. Identify each regional material, including its source, cost, and the fraction by weight that is considered regional.
 5. Credit MR 6: List of proposed rapidly renewable products. Indicate each product containing rapidly renewable materials, including its source and cost of rapidly renewable products.
- E. LEED Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with LEED action plans for the following:
1. Credit MR 2.1 and Credit MR 2.2: Waste reduction progress reports complying with Division 1 Section "Construction Waste Management."
 2. Credit MR 4.1 and Credit MR 4.2: Recycled content.
 3. Credit MR 5.1 and Credit MR 5.2: Regional materials.
 4. Credit MR 6: Rapidly Renewable Materials.
 5. Credit MR 7: Certified wood products.
- F. LEED Documentation Submittals:
1. Credit MR 2.1 and Credit MR 2.2: Comply with Division 1 Section "Construction Waste Management."
 2. Credit MR 4.1 and Credit MR 4.2: Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
 3. Credit MR 5.1 and Credit MR 5.2: Product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.3 QUALITY ASSURANCE

- A. LEED Coordinator: Engage an experienced LEED-Accredited Professional to coordinate LEED requirements. LEED coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

- B. Credit MR 4.1 and Credit MR 4.2: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 10 percent of cost of materials used for Project. Goal is 20 percent.
1. Cost of post-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
 2. Cost of post-consumer recycled content plus one-half of pre-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content plus one-half of pre-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
 3. Do not include mechanical and electrical components in the calculation.

2.2 REGIONAL MATERIALS

- C. Credit MR 5.1 and Credit MR 5.2: Provide a minimum of 10 percent of building materials (by cost) that are regional materials. Goal is 20 percent.

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PART 3 - EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT

- D. Credit MR 2.1 and Credit MR 2.2: Comply with Division 1 Section "Construction Waste Management."

3.2 EROSION AND SEDIMENTATION CONTROL

- A. Prerequisite SSP.1: Comply with Division 1, Section "Erosion and Sedimentation Control".

END OF SECTION 01352

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SECTION 01524 - CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Administrative and procedural requirements for Construction Waste Management.
- B. Related Sections

01715 DECONTAMINATION
02089 HAZARDOUS WASTE MANAGEMENT

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of waste and subsequent incorporation into the Work.

1.3 PERFORMANCE REQUIREMENTS

- A. General LEED Credit MR 2.1, 2.2: Develop waste management plan that results in end-of-Project rates for salvage/recycling of minimum 75 percent by weight of total waste generated by the Work. Owner's goal is to salvage and recycle as much non-hazardous waste as possible including the following materials:
 - 1. Demolition Waste:
 - a. Asphalt concrete paving.
 - b. Concrete.
 - c. Concrete reinforcing steel.
 - d. Gypsum deck (separate steel from Gypsum.)
 - e. Brick.
 - f. Stone Terra Cotta.
 - g. Concrete masonry units.
 - h. Wood studs.
 - i. Wood joists.
 - j. Heavy timber.
 - k. Wood deck.
 - l. Plywood and oriented strand board.
 - m. Wood paneling.
 - n. Wood trim.
 - o. Structural and miscellaneous steel.
 - p. Rough hardware.
 - q. Roofing.
 - r. Insulation.
 - s. Doors and frames.
 - t. Door hardware.

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- u. Windows.
 - v. Glazing.
 - w. Metal studs, runners and accessories.
 - x. Gypsum board.
 - y. Acoustical tile and panels.
 - z. Carpet.
 - aa. Carpet pad.
 - bb. Demountable partitions.
 - cc. Equipment.
 - dd. Cabinets.
 - ee. Plumbing fixtures.
 - ff. Piping.
 - gg. Supports and hangers.
 - hh. Valves.
 - ii. Sprinklers.
 - jj. Mechanical equipment.
 - kk. Réfrigérants.
 - ll. Electrical conduit.
 - mm. Copper wiring.
 - nn. Lighting fixtures.
 - oo. Lamps.
 - pp. Ballasts.
 - qq. Electrical devices.
 - rr. Switchgear and panel-boards.
 - ss. Transformers.
2. Construction Waste:
- a. Site-clearing waste.
 - b. Masonry and CMU.
 - c. Lumber.
 - d. Wood sheet materials.
 - e. Wood trim.
 - f. Metals.
 - g. Roofing.
 - h. Insulation.
 - i. Carpet and pad.
 - j. Gypsum board.
 - k. Piping.
 - l. Electrical conduit.
 - m. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Plastic pails.

1.4 SUBMITTALS

- A. Waste Management Plan: Submit five [5] copies of plan within 7 days of the Notice to Proceed.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three copies of report. Include separate reports for demolition and construction waste. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons (tonnes).
 - 4. Quantity of waste salvaged, both estimated and actual in tons (tonnes).

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5. Quantity of waste recycled, both estimated and actual in tons (tonnes).
 6. Total quantity of waste recovered (salvaged plus recycled) in tons (tonnes).
 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for Substantial Completion, submit five (5) copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Submit indicating receipt and acceptance of salvageable waste donated to individuals and organizations if and when donations occur. Indicate whether organization is tax exempt.
- E. Records of Sales: Submit indicating receipt and acceptance of salvageable waste sold to individuals and organizations if and when sales occur. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Submit record indicating receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices. Submit concurrently with waste reduction progress reports.
- G. Landfill and Incinerator Disposal Records: Submit record indicating receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices. Submit concurrently with waste reduction progress reports.
- H. LEED Submittal: Submit LEED letter template for Credit MR 2.1 and 2.2, signed by Demolition Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
- I. Qualification Data: For Waste Management Coordinator.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 2. Review requirements for documenting quantities of each type of waste and its disposition.
 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 5. Review waste management requirements for each trade.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Include separate sections in plan for building demolition (if any) and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.

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3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
1. Total quantity of waste.
 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 3. Total cost of disposal (with no waste management).
 4. Revenue from salvaged materials.
 5. Revenue from recycled materials.
 6. Savings in hauling and tipping fees by donating materials.
 7. Savings in hauling and tipping fees that are avoided.
 8. Handling and transportation costs. Include cost of collection containers for each type of waste.
 9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- E. General: Implement waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- F. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- G. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- H. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until installation.
 4. Protect items from damage during transport and storage.
 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

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- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Commissions Use:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area designated by Commission.
 - 5. Protect items from damage during transport and storage.
- D. Doors and Hardware: Brace open end of doorframes. Except for removing door closers, leave door hardware attached to doors.

3.3 RECYCLING, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers in addition to construction waste.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical. Waste may be co-mingled at the site and separated at a recycling facility.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 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 construction area. Do not store within drip line of remaining trees.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphalt Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 - 1. Contractor is responsible for breaking up the concrete rubble to a size of 18 inches or less and delivering the material to a centralized rock crushing operation on site, within the Michael Reese Complex. In addition the Contractor is responsible for placing the recrushed concrete (CA-6) in the basement of the demolished buildings with the designated group per below referenced specifications. Use satisfactory soil materials consisting of stone, gravel, and sand, free from debris, trash, frozen materials, roots and other organic matter.
 - 2. Crush concrete and screen to comply with requirements in Division 2 Section "Earthwork" for use as satisfactory soil for fill or sub base.
- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 1. Clean and stack undamaged, whole masonry units on wood pallets.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- E. Metals: Separate metals by type.
 - 1. Structural Steel: Stack members according to size, type of member, and length.
 - 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- F. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.

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- G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- H. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
- I. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
 - 1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- J. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- K. Plumbing Fixtures: Separate by type and size.
- L. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- M. Lighting Fixtures: Separate lamps by type and protect from breakage.
- N. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panel-boards, circuit breakers, and other devices by type.
- O. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees on-site.
 - 1. Comply with requirements in Division 2 Section "Landscaping" for use of chipped organic waste as organic mulch.
- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials that cannot be recycled and used on site to off Commissions property and legally dispose of them.

END OF SECTION 01524