



The Riverside Recycling Facility sits on top of a closed and capped bulky waste and construction and demolition debris landfill on the northwest side of Portland.

STREAMLINING OPERATIONS

C&D MANAGEMENT FACILITY UPGRADE

THE city of Portland, Maine owns the Riverside Recycling Facility (RRF) site, which sits on the far northwest side of Portland on top of a closed and capped bulky waste and construction and demolition (C&D) debris landfill. The site accepts bulky waste, leaves and C&D debris from residents. City crews deliver street sweepings, tree trimmings, inert materials and bulky items. Private companies, including contractors, use the facility as well. Other materials accepted include metals, drywall and roofing shingles. In 2004, almost 47,000 tons of materials were received. Mixed C&D debris comprised more than half of the flow; brush, demolition wood and yard trimmings accounted for about 6,000 tons.

L.R. Higgins of Scarborough, Maine had a long-term contract to manage the RRF. That contract expired last fall and the city wanted to do an independent review of the operation. Gershman, Brickner & Bratton, Inc. (GBB) was asked to help identify the historical baseline for the RRF and make recommendations to the city for its future operation. Subse-

Operation in Portland, Maine has strategies to increase diversion of recovered C&D, including wood that is ground for boiler fuel.

Bob Brickner

quently, GBB was retained to help the city prepare a request for proposal for contract operations, and evaluate the proposals received.

RESIDENTIAL AND COMMERCIAL FLOW

In 2004, Portland residents provided 68 percent of the residential site traffic and 75 percent of the residential volume. The private commercial sector accounts within the city only provided 39 percent of the commercial site traffic and only 31 percent of the weight. Conversely, commercial C&D activity outside the city limits provided 60 percent of the commercial weight to the RRF. Tip fees for residents (<6 cy vehicles) were \$25/cy for mixed C&D, \$18/cy for demolition wood, and \$10/cy for brush and yard trimmings.

The Portland Department of Public Works (DPW) provides Oversized Bulky Waste collection annually for single family homes and apartment buildings in the city. Bulky items collected include furniture, white goods, large toys, mattresses and box springs. The program runs for five (5) consecutive weeks during the spring. In 2004, the DPW collected 970 tons of bulky waste during the annual collection and delivered it the RRF.

The largest single product generated from C&D processing was alternative daily cover (ADC) made from ground C&D. This was 61 percent, by weight, up from 48 per-

Feedstocks accepted at the C&D recycling facility include gypsum drywall (left), roofing shingles (center) and wood from demolition as well as brush and pallets (right).



cent in 2003. This product was shipped to Canadian MSW landfills located just north of the US-Canadian border. Approximately 32 percent of the material was shipped for reuse/recycling including such end products as boiler fuel, compost, drywall, ferrous/non-ferrous metals, C&D fines and asphalt shingles. In 2003, these same markets were 43 percent of the shipments.

CHANGE IN OPERATIONS

A Request for Proposal for a private sector operator of the RRF was issued in the first half of 2005. Work solicited under the RFP was scheduled to begin on November 1, 2005 with the new contractor required to have made all necessary preparations to begin work on this date. All acceptable waste received at the project site would become the property of the proposer at the time the material was unloaded. The Contractor was also allowed to accept third-party waste within the bounds of the Maine Department of Environmental Protection permit.

The RFP outlined that the city would staff the scale house and perform an initial inspection of waste when it arrives. (The contractor, however, is ultimately responsible for ensuring the waste delivered was "acceptable waste.") The contractor uses the scale information provided by the city to generate a monthly report detailing the weight (by material) collected under the auspices of the contract and whether the material was recycled or disposed. This report indicates the disposal, recycling and/or disposal facilities used and the amount, by weight, of individual product shipments.

Three proposals were received as a result of the solicitation. Based on the evaluation process and interviews, Commercial Paving & Recycling Company, LLC (CPRC), a privately-owned recycling services provider and road paving contractor headquartered in Scarborough, Maine, was recommended. The CPRC cost proposal was \$48/ton based on of the outbound weights, with a minimum per annum charge/bill based on 32,500 tons/year. The proposal also included a \$5/ton royalty for every incremental ton in excess of 40,000 tons and a second incremental rebate of \$5/ton for outbound tonnages above 50,000 tons/year. Certain other revenue sharing programs also were offered as part of their proposal.

CPRC does not plan to install any automated sorting equipment. It believes the cost-benefit for automated sorting of mixed C&D debris versus additional material recovery (specifically to capture additional wood versus that recovery already achieved) is not justified from an economic perspective at the present time. Mixed C&D will be manually sorted into two piles, i.e., recyclable C&D (such as wood, metals, and other recyclables) and oversized bulky waste. As much as practicable, these two products will be removed for "final processing and/or landfill disposal."

The wood fraction of the C&D stream is separated in three ways — source separated by the generator upon delivery to the site; manually separated by pickers/inspectors at

MASSACHUSETTS C&D MATERIALS WASTE BAN UPDATE

THE Massachusetts Department of Environmental Protection's disposal ban on specific construction and demolition materials takes effect on July 1, 2006. New or modified waste ban plans addressing how these materials will be handled must be submitted by solid waste facilities to the DEP by April 1, 2006. Materials covered under the ban include asphalt pavement, brick, concrete, metal and wood. The DEP notes that wood is not banned from municipal waste combustors. In addition, existing waste ban regulations cover cardboard and leaves and yard trimmings, which often are generated during C&D projects.

A subcommittee comprised of

building owners, haulers, C&D processors, landfill owners, transfer station owners, municipalities, environmental groups and others identified that there are recycling and reuse markets for the materials banned from disposal. Acknowledging that a 100 percent ban is not feasible for the materials targeted, the DEP explains that an acceptable quantity for disposal is 20 percent or less by volume of the cumulative total of the container (transfer trailer, rolloff or packer truck), i.e., the combined total of asphalt pavement, brick, concrete, metal and wood cannot exceed 20 percent of the load's volume. For details on the C&D disposal ban, go to: www.mass.gov/dep/dep/recycle/reduce/managing.htm.

the tipping area; and separation by excavator operators at the tipping area. Wood waste, tree limbs and brush will be combined with the clean demolition wood and ground into 4-inch wood chips for sale to regional biomass fuel production facilities with the ability to accept 100 percent of the wood chips CPRC makes available. The company has a CBI and a Peterson Pacific grinder.

Street sweepings and catch basin cleanings will be received at the RRF. CPRC will remove the waste material and integrate the rest into the other inerts (concrete, brick, rock, etc.) and use that as aggregate BUD (Beneficial Use Determination) materials ranging from three-quarters-inch to 3-inch crushed and recycled gravel to meet Maine Department of Transportation specifications.

Leaves and yard trimmings dropped off at the RRF will be added to an existing composting operation CPRC has in Scarborough. Compost from that facility will be made available for the city of Portland to use in public work projects. The compost also will be offered for sale at the RRF.

According to Mike Bobinsky, Portland's Director of Public Works, "the City has been extremely pleased with the new contractor, and they have, to date, exceeded our expectations with regard to operations, customer services and financials. Our site now is very user friendly, well laid out, functional and we now receive only compliments about the operations. The contractor we selected has significant experience with recycling construction material and we are seeing the material leave our site for end users and further recycling as fast as it comes in from our customers." ■

Bob Brickner is Senior Vice President of Ger-shman, Brickner & Bratton, Inc. in Fairfax, Virginia.

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