Journey of a Debris Box

Ever wondered what happens to construction and demolition debris after it leaves your job site? Follow a debris box to find out!

Picture this: your debris box of yard waste is full, and you’ve just called your hauler to come pick it up from your job site. Using a hook-lift system the driver pulls the container onto a roll-off truck, covers the load, and drives to a Certified C&D Facility, such as the Marin Resource Recovery Center (MRRC) in San Rafael, to process the material for recovery.

When the debris box arrives at MRRC, staff first go to the scales to record how much material was collected. The driver then takes it to the tipping floor, opening the back door on the end of the debris box and raising the truck’s hydraulically operated bed to allow the yard waste to fall free. Staff check to make sure no contaminants (e.g., garbage) have found their way into this “clean green” debris box.

Since this yard waste was source separated at the job site, it gets added directly to the pile of green waste awaiting further processing. Each day, staff feed this material into an industrial grinder that shreds green waste into mulch, achieving a uniformity in the size of mulch pieces by screening chips through a trommel. This step ensures consistency and supports marketability of the finished product.

Mulch is loaded directly from this processing system into large transfer trucks. Buyers purchase the material for biomass energy production, landscaping mulch, and other marketable end uses.

Separation of materials at the job site using dedicated debris boxes provides a clean waste stream that can be more easily processed into new products. This result can be achieved if C&D materials are comingled, but, separating recyclable material afterwards adds cost, increases the likelihood of contamination, and decreases the chances for its highest and best use.

For example, unpainted sheet rock is often source separated and, since it is made of gypsum, recovered by grinding it down for use as a soil amendment. Sheetrock easily breaks apart and if added to a mixed C&D debris box its chances for full recovery are reduced: small pieces are easily lost through the sorting process which end up in the residual materials taken to landfill. When possible, best practice is to source separate materials at the job site to achieve a higher rate of recovery for your project.

But what if you have a debris box of mixed C&D materials?
At MRRC, mixed C&D loads travel over a sort line to recover as much as possible including, but not limited to, sheetrock, concrete, brick, and bulky items. Each month, MRRC processes approximately 3,000 tons of recyclables through a customized system of screens, conveyors, blowers, magnets in addition to using hand-sorting to maximize recovery. Recovered materials are then marketed by MRRC, and any remaining residual is sent to landfill.

All Certified C&D Facilities approved by Zero Waste Marin achieve greater than 65% diversion of waste from landfill. If you are careful to request that your debris box hauler delivers all job site debris to one of the Certified C&D Facilities, recycling (and compliance with State Building Code) is easy to document. If you deliver mixed C&D materials yourself, be sure to ask that your load be processed for recycling!

So remember:

1. Source separation is preferred for higher recovery
2. Use a permitted debris box hauler and request that the C&D is processed at a Certified C&D Facility, or self-haul to Certified C&D Facilities
3. For loads of mixed C&D, request that they be processed for recycling.

Taking these steps will increase the amount of materials your project can divert from landfill disposal and saves resources by helping C&D waste become useful recycled products.