

Construction waste management

Possible 3 points

Intent

To reduce construction waste generation and to reuse and recycle debris.

Requirements

Reduce total construction waste or divert from landfills and incinerators a large proportion of the waste generated from new construction. Use the tables below to calculate the percentage of waste avoided or recycled. Exclude excavated soil, land-clearing debris from calculations. Include materials destined for alternative daily cover (ADC) in the calculations as waste (not diversion). Any waste-to-energy is not considered recycling for this credit.

Table 1. Baseline waste for LEED reference home

| Bedrooms | Conditioned floor area (sf) | Waste (lbs) |
|-----------|-----------------------------|-----------------|
| 1 | 1,000 | 4,200 |
| 2 | 1,600 | 6,720 |
| 3 | 2,200 | 9,240 |
| 4 | 2,800 | 11,760 |
| 5 | 3,400 | 14,280 |
| 6 | 4,000 | 16,800 |
| 7 | 4,600 | 19,320 |
| 8 or more | — | Area (sf) * 4.2 |

Table 1a. Baseline waste for LEED reference home

| Bedrooms | Conditioned floor area (sq. m) | Waste (kg) |
|-----------|--------------------------------|---------------------|
| 1 | 93 | 1 905 |
| 2 | 148 | 3 048 |
| 3 | 204 | 4 191 |
| 4 | 260 | 5 334 |
| 5 | 315 | 6 477 |
| 6 | 371 | 7 620 |
| 7 | 427 | 8 763 |
| 8 or more | — | Area (sq. m) * 20.5 |

For multifamily buildings, use the project's floor area for any non-unit spaces, and add it to the floor area of the LEED reference home calculated for each unit.

Calculate the waste generated by the project according to the following equation:

$$\text{Project construction waste} = \text{Total waste} - (\text{Recycled waste} * 0.25)$$

To convert volume to weight, assume 500 pounds per cubic yard (296 kg per cubic meter) of mixed construction waste, or use Table 2 to calculate the weights of specific waste products.

Table 2. Volume-to-weight conversion for construction and demolition debris

| Material | LB/CY | TONS/CY | CY/TON | KG/cubic meter |
|-------------------------|-------|---------|--------|----------------|
| Aluminum (scrap, whole) | 175 | 0.09 | 11.1 | 103.8 |
| Asphalt | 1,380 | 0.69 | 1.4 | 818.7 |
| Brass (scrap) | 906 | 0.45 | 2.2 | 537.5 |
| Brick (common hard) | 3,024 | 1.5 | 0.67 | 1794 |

| | | | | |
|-------------------------------|-------|------|------|--------|
| Cardboard (uncompacted) | 100 | 0.05 | 20 | 59.3 |
| Carpet & Padding (loose) | 84 | 0.04 | 25 | 50 |
| Concrete | 1,855 | 0.92 | 1.4 | 1100.5 |
| Copper (scrap) | 1,094 | 0.56 | 1.8 | 649 |
| Dirt (loose, dry) | 1,890 | 0.94 | 1.1 | 1121.2 |
| Drywall | 500 | 0.25 | 4 | 296.6 |
| Glass (broken) | 2,160 | 1.1 | 0.91 | 1281.4 |
| Metal (scrap) | 906 | 0.45 | 2.2 | 537.5 |
| Mixed C&D Debris | 900 | 0.45 | 2.2 | 533.9 |
| Mixed Waste/Trash | 350 | 0.17 | 5.9 | 207.6 |
| Rock (loose) | 2,570 | 1.28 | 0.78 | 1631.5 |
| Roofing (wood shake, shingle) | 435 | 0.22 | 4.5 | 258 |
| Tree Limbs & Stumps | 1,080 | 0.54 | 1.9 | 640.7 |
| Wood (scrap, loose) | 330 | 0.17 | 5.9 | 195.7 |
| Yard Trimmings (mixed) | 108 | 0.05 | 20 | 64 |

Source: Contra Costa Waste Authority

Table 3. Points for reducing construction waste below baseline

| Percentage reduction | Points |
|----------------------|--------|
| 10% | 0.5 |
| 20% | 1.0 |
| 30% | 1.5 |
| 40% | 2.0 |
| 50% | 2.5 |
| 60% | 3.0 |