Construction & Demolition Materials Diversion

November 19, 2014
King County GreenTools
serving all stakeholder groups

Green Tools: King County Sustainable Cities
Green Tools: For Builders & Homeowners
Green Tools: King County Green Building
Green Tools: Construction and Demolition Recycling
What is C&D?

• Short-hand for “Construction & Demolition”
• Materials generated during construction and demolition activities which add no further value to the project
• “C&D Waste”
• “C&D Materials”
• “C&D Debris”
Definitions

• Waste – Materials for which the effort to extract value exceeds the value of the material itself
• Recycle – Processing a material into something new
• Salvage – Recovering materials which have reuse value without extensive processing
• Diversion – Guiding materials of value away from the waste stream
Benefits of Recycling Construction Debris

• Cost is often lower
• Green Building certification credits
• Reduces need for creation of new materials
• Provides local jobs and strengthens economy
• Reduces landfill space
• Saves energy and water
• Keeps the project in compliance with local regulations
Relevant C&D Regulations

- King County Green Building Ordinance
- City of Seattle ordinances
- King County ordinances
- Regional Code Collaboration - City ordinances
Green Building Ordinance
C&D Requirements

• Submit a waste diversion plan at 30%
• Submit a waste diversion report at completion
• Achieve diversion rates of:
  – 80% by 2016
  – 85% by 2020
Seattle Ordinance Overview

• Banned materials may not be sent to a landfill
• Use of certified facilities is encouraged
• Must submit:
  – Waste management plan
  – Waste management report
  – Salvage assessment
• Threshold: 750 sqft or $30,000
Seattle’s Banned C&D Materials

- ABC – 2012
- Metal – 2014
- Cardboard – 2014
- New gypsum – 2014
- Clean wood - 2015
- Plastic film wrap - ?
- Asphalt shingles - ?
- Carpet - ?
King County C&D Policy Background

Existing C&D Management System

- Inter-local Agreement’s with cities require that King County safely manage solid waste, including C&D.
- Contracts with Republic and WMI expire Sept 2014; extending until Sept 2015 to develop alternative approach.
- Primary focus was disposal options
- Exclusive contracts no longer an option

Going Forward

- New Contracting Approach
- More emphasis on recycling
- Current recycling rate is 67%; goal is 85% (by 2025)
- Ordinance needed to revise Title 10
King County Solid Waste
C&D Ordinance

- C&D industry stakeholders said they support a level playing field and enforcement

- Establishes C&D facility designation system
  - Facility agreements cover surcharge, liability, compliance
  - Periodic facility residuals assessment

- Bans C&D materials from being landfilled
- Increases enforcement
Job Site Permitting Ordinances

• Job sites are under the jurisdiction of the local construction permitting agency
• Regional Code Collaboration (RCC) effort working to develop standardized code/ordinance templates
• RCC C&D subcommittee working on C&D codes/ordinances
Regional Code Collaboration
Draft C&D Code Language

• Applies to all projects over 1000 sqft that require a building permit.
• Required (all): Waste diversion plan and waste diversion report
• Required (building removal and alterations): deconstruction and salvage self-assessment, statement of compliance with asbestos regulations
• Must use certified processing facilities
• Must use at least 2 bins at the jobsite
• Minimum diversion rates may be set by each jurisdiction
• Final certificate of occupancy issued after submission of waste diversion report
Project Management
How is C&D Commonly Managed at a Job Site?

• In a big pile
• Burned or buried
• All ground up
• Everything in one dumpster
How Should C&D be Managed at a Job Site?

• At least 2 containers
  – waste
  – diversion/recycling
• Containers should be co-located
• Containers should be clearly labeled
• Closed securely during non-work hours
• Materials should be kept dry whenever possible
How Do C&D Materials Leave a Job Site?

- Self haul
- Independent hauler
- Hauler from processing facility
Single Commodity Recycling Facilities
Commingled Processing Facilities
Pick Lines
Pick Line Recyclables
Special Commodities
What Happens to C&D Materials that are Recycled?
What is Beneficial Use?
What Happens to C&D Materials that are Handled as Waste?
So how do we make sure materials of value are diverted from the waste stream?
Be Clear About Your C&D Expectations
Include C&D in Your Contracts

- Don’t leave the handling of C&D to chance
- Specify a target diversion rate
- Incorporate incentives/requirements for meeting target diversion rate
- Include guidance on which C&D materials may have recycling or reuse value
- Emphasize C&D at pre-bid and pre-mobilization meetings
- Require material diversion plan and report and use of a 3rd party certified processing facility
Make It Simple
Tools to Provide to Contractors

• Material diversion plan and report forms
• Cost calculation form
• Salvage/deconstruction assessment report
• C&D container signage
Simplified C&D Tracking

King County Green Building Ordinance

Sustainable Infrastructure Scorecard:

- 30% C&D Diversion Plan
- Complete – C&D Diversion Report

Green Halo
**Instructions**

Fill out the following Construction & Demolition Diversion Plan for all C&D projects at 30% design.

Hover over cells that have red comment triangles in the upper right corner to view additional information and instructions.

Next to each potential waste material produced, select the appropriate check box to identify if the material will likely be diverted for "reuse on site", "salvage off site", "recycle source separated", "recycle commingled", or "disposal". Select more than one channel if appropriate.

Use the "Hauler" column to identify who will likely haul material to the receiving facility and the "Receiving Facility" column to select the location where materials will be hauled.

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### Construction & Demolition Diversion

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<th>Reuse on site</th>
<th>Salvage off site</th>
<th>Recycle Source Separated</th>
<th>Recycle Commingled</th>
<th>Disposal</th>
<th>Hauler (or identify &quot;self&quot;)</th>
<th>Receiving Facility</th>
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**Totals:** 0 0 0 0 0 0  Total Applicable Materials: 18

* May not be taken for disposal within the City of Seattle

** Clean gypsum may not be taken for disposal within the City of Seattle
## Instructions

Please complete this report for your construction or demolition project prior to Final Inspection Approval from the applicable permitting department. Hover over cells that have red comment triangles in the upper right corner to view additional information and instructions.

### Construction & Demolition Diversion Report

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#### Diversion Records:

- If "Other" specify Material Type:
- If "Other" specify Diversion Method:
- If "Other" specify Receiving Facility:

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Check Compliance While Course Correction Is Still Possible
Verify the C&D Process Early

- Is C&D going to appropriate facilities?
- Are there at least two containers?
- Are tip receipts provided which clearly state which material stream loads are going into?
- Is someone checking containers daily on-site?
- Is container signage present and understandable by job site workers?
Kinley Deller, C&D Specialist
King County GreenTools
(206) 477-5272
kinley.deller@kingcounty.gov
www.greentools.us