

Construction Practices Compiled Comments

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| General | | <p>While most of the sustainability initiatives focus mainly on buildings, LEED ratings and similar programs offer tangible benefits to civil projects. For example, Airports Council International, North America (ACI-NA) reports that green building and sustainability concepts played a prominent role in civil projects: "Airports are implementing infrastructure enhancements such as new runways, taxiways, and terminals to improve the efficiency of the aviation system and overall passenger experience. The 2008 opening of new runways at Chicago's O'Hare, Seattle-Tacoma and Washington Dulles International Airports and terminals at Indianapolis, Raleigh-Durham and Detroit International Airports." from http://www.aci-na.org/static/entransit/enviro_brochure.pdf</p> | J. Gross |
| General | | <p>ACI-NA offers an outstanding collection of page links to various airport sustainability initiatives, including OMP, of course) http://aci-na.org/sustainability/sustainability-links.html</p> | J. Gross |
| General | | <p>Most of the following ideas should be familiar. For the most part, I have chosen examples relevant to H6167.09-01 Concourse UAL B/C Apron Pavement Expansion Joint Repair.</p> <p>Material recycling examples:</p> <ul style="list-style-type: none"> • Flyash/slag cement in concrete: Reusing waste product from one industry (power generation or steel production) to construction. Flyash/slag cement add strength to concrete in lieu of more expensive cement, allowing cost savings. • Concrete/asphalt: Recycling into stone base by crushing. • Concrete/asphalt: It is also possible to substitute recycled aggregate for virgin aggregate in concrete and asphalt mixes. There has been much greater success with recycled asphalt than concrete, though. • Steel: one of the oldest recycled materials of all: raw materials, e.g. rebar; also into tools, equipment, etc. • Wood: Reusing forming materials. • Form release agent: Fractional distillation or "cracking" of waste oil can result in | J. Gross |

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| | | <p>recycled "form oil" which is basically number 2 fuel oil. This conflicts with volatile organic compound (VOC) reduction, however. There are water-based release agents available to reduce VOC emissions. Incidentally, we use a water-based concrete curing compound.</p> <ul style="list-style-type: none"> • Air-entraining agents (AEAs) for concrete: another example of using waste material from another industry in construction. AEAs add tiny air bubbles to concrete which enhances freeze-thaw resistance, critical to cold-weather climates, particularly for paving applications. One precursor for AEAs is vinsol resin, a waste product from the paper industry. In fact, one product even identifies itself as 'VR' • Earth spoil: can remain onsite for use in berm construction. Affords decrease in landfill volume and decreased transportation requirements. | |
| General | | <p>Examples of materials that ARE NOT RECYCLED, and offer opportunities:</p> <ul style="list-style-type: none"> • Geosynthetics: I have seen requirements for virgin precursors frequently for geosynthetics in general and geomembranes in particular. There is a perception that anything but virgin precursors degrades the quality of finished product. Geomembranes are frequently used in environmental applications--agencies want to minimize risk--perceived or real. Advancing technology may improve quality and successful applications may alleviate the perception that "anything but virgin is bad." • Insulation: there may be economic feasibility issues. For example, it is possible to recycle carpeting; however, it is much cheaper just to dispose of waste carpet as construction and demolition debris. • Plastic resin: standard specifications often require virgin precursors. One vendor, Advanced Drainage Systems (ADS) promotes "LEED-friendly" alternative specification (i.e. allows for recycled precursor material) for double-wall drainage pipe. http://www.ads-pipe.com/en/product.asp?productID=289 | J. Gross |
| 6.0 | | <p>Use of bio-diesel has shown to be an effective method for reducing diesel engine emissions. The main concern is purchasing the bio-diesel which meets the ASTM specification and from a refinery which follows the BQ-9000 quality guidelines.</p> | T. Oftedal |
| 6.0 | | <p>Use of retrofit particulate filters can be problematic to the contractor depending on the</p> | T. Oftedal |

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| | | technology and installation. CARB is proposing revisions to the verification procedure to address these concerns. | |
| 6.0 | | Using Fleet average concept has been and is continues to be used on job sites. However for a large project this does place an accounting requirement on the contractor. | T. Oftedal |
| 6.1 | | More strict idling requirements- OMP already meets the draft City of Chicago Ordinance of 5 mins in an hour | All |
| 6.1 | | Add Biodiesel as an option <ul style="list-style-type: none"> • Depends on the region- based on carbon footprint of the production • Availability within region • Could have equipment issues • Minimal increased costs | All |
| 6.1 | | Enhance requirements for employee shuttles to contractor parking and addition of bike racks | All |
| 6.1 | | Language should be added to this section regarding the use of GPS. | All |
| 6.1 | | Provide exemption for idle time restriction during cold weather or when equipment is awaiting employment during a large scare operation, i.e., concrete trucks or asphalt trucks awaiting discharge at the paving train. | J. Dote |
| 6.1 | | Require Contractor to use shuttle buses to get personnel to work site rather than the usual pick up truck fleet. One way to do this is to restrict vehicle permits. | J. Dote |
| 6.2 | | Discussion was to leave this section as is so it is specific to each airport | All |
| 6.3 | | Add to the Erosion and Sedimentation Control Section: <ul style="list-style-type: none"> • Construction dust larger portion of pollution than vehicles emissions • Other dust control options are available | All |
| 6.3 | | Add sweepers and dust control to this section | A. Perez |
| 6.5 | 14 | Construction Waste Management <ul style="list-style-type: none"> • Consider using deconstruct approach when demolishing buildings • Fire hydrants, pumps and mechanical equipment • Reuse of fence – Type D Jersey Barrier • Reuse of construction trailers • Reuse of temporary FAA equipment/facilities | All |

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| 6.7 | | More emphasis on the use of particulate filters | J. Chilton |
| 6.8 | | Require bike racks at public buildings. | J. Dote |
| 6.9 | | Add recycle yards and batch plants on site to the Construction Material Conveying Section | All |
| 6.9 | | Require batch plants to conserve water. Meter water supply. Require plants to have regular dust control program and initiate remarks for non-compliance work. | J. Dote |
| 6.9 | | Emphasize the use of rail | J. Chilton |
| 6.10 | 33 | Add Case Studies | All |
| 6.10 | | Case Studies: Projects near the Hilton could possibly be considered – construction being conducted during nighttime hours | F. Grimaldi |
| 6.10 | | In terminal areas, require noisy activities like demo, grinding etc. to nights only. Implement barricade standards in terminal construction areas to mitigate noise, dust etc. (DOA has a standard). Example: wet grinding terrazzo was utilized at MDW & ORD to eliminated dust and control noise work behind barricades also helped. In addition, require Contractors in terminal buildings provide prefilters and local exhaust to mitigate dust and odors from affecting public. Example: Painters tent off area and local exhaust over to outside so epoxy smell not permeating public areas. | J. Dote |
| 6.11 | | Add examples and develop technical specifications to allow recycled material | All |
| 6.11 | | Develop this section to encourage use of temporary construction materials | K. McKenney |
| 6.11 | | In regards to the Temporary Construction Materials section, the project specifications need to be modified because typically the specification requires that new materials be used. There are a lot of recycled materials that could be used but need to be investigated on a case-by-case basis. | J. Dote |
| 6.11 | | Forwarding information on recycled material from Rossi Contractors. | J. Dote |