



## Preparing for Your Sustainability Charrette

In order to make the most of your upcoming Sustainability Charrette, please come prepared with as much of the following information as possible to inform our discussion.

### Owner

- **Density:** Is this project in an urban redevelopment zone? Do at least 10 of the following basic services exist in the surrounding area: bank, place of worship, convenience grocery, day care, cleaners, fire station, beauty, hardware, laundry, library, medical/dental, senior care facility, park, pharmacy, post office, restaurant, school, supermarket, theater, community center, fitness center, museum?
- **Public Transportation:** Is the building within ½ mile of metro or ¼ mile of 2 bus lines?
- **Plumbing:** Do you have concerns about using low-flow faucets, showerheads, kitchen sinks, dual-flush toilets and (where applicable) water-free urinals?
- **Commissioning:** Does your Quality Control Process currently include hiring a Commissioning Agent to ensure that the building systems have been installed properly and are functioning as intended?
- **Performance Measurement:** would you find it beneficial to be able to track the actual use of utilities on a system-by-system basis within your building? If this is a residential building, is separate metering of electricity and water planned?
- **Green Power:** would purchasing green-e certified power (an add-on to your electric bill that subsidizes generation of renewable energy) be a viable option for you. (This would come out of the operating budget, not your construction budget.)
- **Occupant Recycling:** Are you required by law/able to incorporate the storage and collection of paper, glass, plastics and metals generated by occupants once the building is operational?
- **Comfort Survey:** Would you be willing to survey the occupants of your building within 6 to 18 months of construction completion to determine whether they are happy with the HVAC system performance and to make corrective action if more than 20% of the occupants are unhappy?

- **Green Housekeeping:** Would you be willing to establish a maintenance contract for common areas to be cleaned using bio-based cleaners (and for residential projects provide a welcome basket containing bio-based cleaners and information on their benefits and where to purchase them)

## Architect

- **Square Footages:** Project square footages (gross building, site, rooftop). Number of occupants (residents and/or FTE employees) are expected in the building?
- **Roof:** What type of roofing approach do you envision for the project? What is the square footage of the roof (minus equipment, skylights and parapets)? Is there amenity space on the roof or is there a roof that is visible from occupied spaces?
- **Parking:** Number of parking spaces planned for project. Will some or all of these spaces be structured? How will parking be managed or assigned? Does the number of spaces equal or exceed the minimum local zoning requirements?
- **Open Space:** Does the project have any zoning open space requirements? Has/could the project reduce the building footprint, hardscape, access roads and parking to provide vegetated open space that exceeds the local zoning open space requirements by at least 25%?
- **Lighting:** What lighting power densities are being planned? What exterior lighting is planned for the project? Are there any unique security concerns that might affect the exterior lighting strategy?

## Architect (and Construction Manager where applicable)

- **Construction Waste Management:** Will there be space on site for staging of separate dumpsters for recyclable construction waste?
- **Recycled Content:** What are the major opportunities for using recycled content products on the job? How much metal, rebar, drywall, ceiling tile, carpet?
- **Regional Materials:** Have sources for the major components of the project been identified? Would purchasing them within 500 miles be feasible?
- **Reclaimed Materials:** What opportunity to use reclaimed/salvaged materials exist on the project?
- **Wood:** What kind of/how much permanent wood or composite woods will be installed in the building? Do you have concerns about using formaldehyde-free composite wood products?
- **Low Emitting Materials:** Do you have any concerns about using low emitting paints, sealants, adhesives or carpet?

- **Construction IAQ Management Plan:** Do you have any concerns about following SMACNA Guidelines during construction (covering ductwork and materials from moisture and particulates)?

## Civil Engineer

- **Site:** Is the building at least 5' above the 100 year flood plane and more than 100 feet from a wetland or 50' from a body of water?
- **Brownfield:** Is there any known soil or groundwater contamination that requires remediation?
- **Stormwater Quantity Management:** Is the existing site imperviousness less than, equal to or greater than 50%?
  - o How feasible is it to develop a plan to prevent the post-development peak discharge rate from exceeding the pre-development peak discharge rate and quantity for the 1 and 2 year 24-hour storm (1.5 year storm for projects following LEED 2.1)
  - o What strategies would you recommend to decrease the volume of stormwater runoff by 25% for the 2 year 24-hour storm? (1.5 year storm for projects following LEED 2.1). If infiltration is not feasible (typical for a dense urban site), what size cistern would be required to hold back this amount of water for reuse within the building?
- **Stormwater Quality Management:** Could/have you develop(ed) a strategy for quality control to result in 90% of runoff from the average rainfall being treated using BMP's with the result of 80% of the average total suspended solids being removed?

## Landscape Architect

- **Planting:** What is the square footage of landscaped areas and what type of plantings being considered (e.g. planters, lawn, native plantings?)
- **Irrigation:** Is an irrigation system planned?

## MEP Engineer

- **Plumbing:** What fixtures you would typically specify (with flow rates/flush volumes).
- **Energy Performance:** Do you envision any challenges with meeting ASHRAE 90.1-2004 (ASHRAE 90.1-1999 for LEED 2.1 projects)? Is an energy model planned to be performed for the building? Do you have any ideas for energy efficiency measures that may help to achieve higher performance above the ASHRAE minimums?
- **HVAC:** What is the general HVAC system strategy for the project? Is a central system or individual package units being planned?
- **CHFC's and HCFC's:** Is there existing equipment containing CFC's that will need to be phased out? How viable do you think it would be to use HCFC-free equipment?

- **Filters:** Could your preferred HVAC system accommodate MERV 13 filters?
- **Lighting:** What lighting power densities are being planned? Would you consider occupancy sensors or daylight photosensors for any areas of the building?
- **CO2 Monitoring:** Is it feasible to provide CO2 monitoring that provides feedback on space ventilation performance in a form that affords operational adjustments?
- **Increased Ventilation:** For mechanically ventilated buildings, how feasible is it to design ventilation systems that result in an air change effectiveness (Eac) greater than or equal to 0.9 as determined by ASHRAE 129-1997. For naturally ventilated spaces, could you demonstrate a distribution and laminar flow pattern that involves not less than 90% of the room or zone area in the direction of air flow for at least 95% of hours of occupancy?
- **Thermal Comfort:** Do you believe that this project would fall within the ASHRAE 55-2004 requirements without the need for providing humidification?