



VERIFIED**GREEN**

Helping You Build Green

Bringing Green to the Field

May 21st, 2008





Welcome



- Introduction
- Goals
- Format

What we will cover

- Working with Existing Organized structure
- SOP – Building it in
- Word choice
- Specifications
- Business development
- Overcoming the document barrier ?

Theroy

- Great to discuss over the drafting board
 - Big broad ideas and solutions
 - Over-designed solutions
 - Architect or Designer centric
 - Management centric
 - Feels good
 - Build internal belief among owners/designers/architects
- How do you transfer that conviction?
- How do you bring practical Green to the field?

Staff - hurdles

- Resistance
 - Cost – perceived increase in cost
 - Fed by industry rumour
 - Pride – we build top quality already
 - Skepticism – It is a fad. Not meaningful. Code has been wrong before.
 - Change – “We’ve always done it this way.” – change is always resisted
 - Intimidation – “It is too much work”

Staff - hurdles

- Example “Jim” We all have one
 - Carpenter who has been in the trades a long time
 - Cares about his work
 - Solves problems for you daily
 - Probably thinks he knows more about the building process than you (might be right)
 - Might feel a little under-appreciated from time to time
 - Either he will “get on board” or will look at this as another “Half-baked idea from the office” and dismiss it.

Subs - hurdles

- Resistance
 - Change – they have their suppliers/vendors.
 - They have developed systems
 - Change = work
 - Unions adding pressure
 - Perceptions about Green, building science, etc.
 - Skepticism – New system, New technology, Different technology Gossip, Flawed grasp of building science

Subs - hurdles

- Cost – They worry that their bids will be too high and you won't understand why
 - They automatically add to their base bids when they see the word Green
 - Confusion about what different programs require / reward for materials and systems

Staff - Steps to integration

- Assemble a team
 - Identify Core subs
 - Identify/create Internal champions
 - External resources
 - Raters, consultants, vendors

Staff - Being Specific

- Set Goals – Big ones
 - Build 100% certified Green projects
 - Standardization
 - All projects will have X
 - Job sites will always have X
 - Core process or material changes
 - Team approach to projects
 - Reduce material waste on projects
 - No products that contain chemical “X”

Staff- Being Specific

- Define goal strategies – small ones
 - Update your will & won't use material lists
 - We will not use product X
 - We will always use product X
 - Identify easy-to-change elements of the business
 - Identify easy-to-change elements of the job site
 - Develop new best-practices – (This must be an ongoing process!)

Staff- Being Specific

- Develop a plan for incremental changes
 - Set milestone events for the company, staff, subs
 - Set measurement tools in place before beginning

Staff - Being Specific

- Present the idea “Big Picture” to staff - ALL
 - Set the tone
 - Explain your philosophy - why is the company heading in this direction. Build belief for your cause (Sell it)
 - Present your preliminary plan for change (but it needs to be good)
 - Solicit input from your field staff and office staff

Staff - Being Specific

- Follow through
 - Review drawings to ensure that standards have been included
 - Follow up with Staff to discuss ideas, questions, concerns, etc.
 - Listen

Subs – getting them on board

- Two Strategies
 - Bring them on board
 - If they are believers this is a good strategy
 - They may have ideas/suggestions to help you meet your goals
 - Their expertise can save a lot of time, avoid problems
 - The team strategy is proven to be more cost objective

Subs – Getting them on board

- Don't tell them
 - Change your specs
 - You design the system – they build it
 - You set jobsite rules – They follow them

Subs – Getting them on board

- A hybrid of the two systems can work. It is recommended that you use the first strategy when possible
 - The reality is that we rely on our subs and their expertise
 - Our subs make the project work and play a role in its success and failure

Subs – Getting them on board

- Let them go
 - We let subs go for poor performance on the job site, poor service, job site neglect – this is no different.

Vendors

- Talk with your lumberyard
 - Do they have sales reps trained in Green?
 - Set estimating requirements
 - No 2x10 or larger material
 - No formaldehyde added materials as standard
 - Fingerjointed Studs
 - FSC certified framing materials
 - FSC trim
 - Low VOC adhesives

Vendors

- Require Data sheets on all products
 - Don't accept product specs on someone's word
- Leverage your vendors – they want to sell to you, make them earn it
- Let them do the research and present you with the results
 - You must set parameters for them (GreenStar, LEED for Homes, Green Communities)

Mechanical contractors – Base line

- Require manual J for all projects submitted with their bids
 - All rigid ductwork
 - Seal all ductwork
 - Framing and wall cavities are not ductwork
 - No copper for water lines unless required by code
 - Use ABS wherever possible

Mechanical contractors – Base line

- Geothermal
 - Require manual J and full system design. This should include analysis of soil and water table height estimate
 - No pump and dump systems
 - No direct expansion systems

Designers

- Energy Star appliances
- Locally sourced materials
- No carpet
- No can lights

What can you do tomorrow

- Decide to have a site plan for every project that designates how the site will be used.

Include:(SOP)

- Parking (even if it is the street)
- Material Drop area
- Material Storage area
- Cut Zones
- Traffic Area
- Disposal Area
- Recycling area

What can you do tomorrow

- Mark the Site (SOP)
 - Storm fencing / Silt fencing to indicate paths of travel on the site
 - Silt fencing around any disturbed earth
 - Post signs
 - Post the Site plan

What can you do tomorrow

- Waste Management Plan (SOP)
 - How is waste handled on your job site
 - Require a minimum recycling % from your roll-off company (40%- 60%)
 - On site recycling
 - On site material separation (mark with storm or silt fencing)
 - Guidelines for what materials are to be re-used / set aside
 - Penalties for non-compliance



What can you do tomorrow



POST THE PLANS

Water Conservation

5 Easy Steps

1. Install .5gpm aerators on faucets \$1.50
2. Install 1.5 gpm showerheads (.5 gpm aquahelix - \$10.00) \$12.00 – 49.00
3. Install dual-flush (1.1gpf) toilets \$210-240
4. Install chlorine filters on showerheads \$38.59
5. Install rain-barrels (20% recovery) \$50-100 per location

Resource Efficiency

5 Easy Steps

1. Think local
2. Think Durable (different from low maintenance)
3. Reduce
4. Re-use
5. Recycle

Energy Efficiency

5 Easy Steps

1. Blower door and Scan always
2. Air seal penetrations
3. Insulate properly
4. Reduce the load (CFL, LED)
5. Use high performance windows

Site and Community Impact

- 5 Easy Steps
- Plan and mark your site
- Limit your use of off gassing product
- Design and grade to hold storm water on site
- Plant native and drought tolerant plants
- Reduce impervious surfaces on the site

Indoor Environmental Quality

- 5 Easy Steps
- Eliminate carpet-
- Use no VOC paints, primers, sealers
- Specify no added formaldehyde cabinetry
- Test for Radon and mitigate if 2PcL+
- Test for Lead and Asbestos and mitigate





THANKS



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