# SUSTAINABLE BUILDING
# STRAW-BALE CONSTRUCTION
## TRIPLE BOTTOM LINE BENEFITS

## PROSPERITY
## ECONOMIC BENEFIT

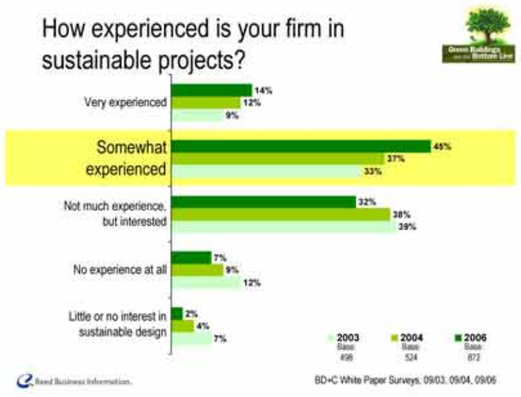
PERFORMANCE VALUE: SHORT TERM COSTS REFLECT A MORE ECONOMICAL BUILD THROUGH FASTER CONSTRUCTION ——> LOWER LABOR COSTS
LONG TERM COSTS CONSIST OF MORE EFFICIENT ENERGY USAGE THAN THE COMMON BUILDING ——>LOWER ENERGY BILLS

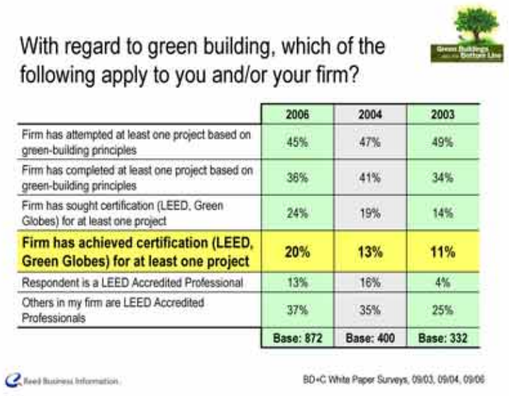
TIME: FASTER BUILD DUE TO RELATIVE EASE OF CONSTRUCTION ——> OWNER/ BUILDER COOPERATIVE

MATERIALS: LOCAL, ENVIRONMENTALLY RESPONSIBLE MATERIALS AVAILABLE ——> LESS SHIPPING, RESULTING IN LOWER COST AND ACQUISITION OF LEED POINTS
- SOURCES REPORT NEW HOMES BUILT FOR AS LITTLE AS $40/SQ. FT.——> APPRAISED FOR $70/SQ. FT. (www.thefarm.org)

LEED RATING: PRESENTS POSSIBILITIES FOR POWERFUL BUSINESS STRATEGY ——> COMPLETION OF LEED CERTIFIED STRUCTURES RESULTS IN FREE ADVERTISING; APPEALS TO NEW BROADER, QUICKLY EMERGING CLIENT BASE
- CLIENT BASE IS GROWING DUE TO ELEVATED LEVELS OF ENVIRONMENTAL AWARENESS——> THIS MARKET GROWTH COINCIDES ACCORDINGLY WITH LEED STANDARDS; BROADER MARKET = HIGHER DEMAND = $ FOR GREEN BUILDERS ——>MORE GREEN BUILDING
- EXISTING COMPUTER SOFTWARE ASSISTS IN STREAMLINING LEED SPECS (ie BSD SPECLINK)

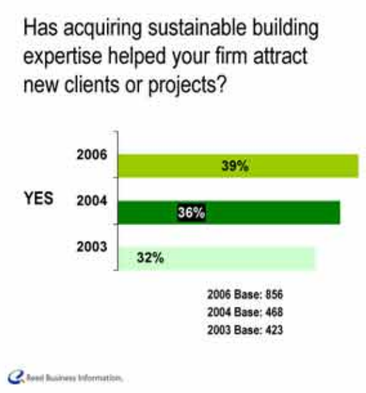
INCENTIVES: INCENTIVES HAVE BEEN PUT IN PLACE TO PROMOTE GREEN BUILDING TECHNIQUES ——>
ARLINGTON, VIRGINIA: BONUS DENSITY/HEIGHT INCENTIVES FOR LEED CERTIFIED BLDGS
SANTA BARBARA, CALIFORNIA: FAST TRACK BLDG. PLAN APPROVAL, DESIGN ASSISTANCE, AWARDS, AND LOCAL TAX RELIEF FOR GREEN BUILDERS
KING COUNTY, WASHINGTON: $15-25,000 GRANTS, FREE PROJECT MNGMT, FREE TECH, ASSISTANCE TO GREEN BUILDERS; *BUILT SMART PROGRAM*: OFFERS FINANCIAL INCENTIVES FROM SEATTLE CITY LIGHT FOR ENERGY EFFIECIENT HOUSING; *CONSTRUCTION WORKS PROGRAM:* GIVES MEDIA RECOGNITION, FREE ASSISTANCE FOR INCREASED RECYCLING/REUSE; *WATERSMART TECH PROGRAM:* AWARDS CASH REBATES FOR IMPLEMENTATION OF WATER SAVING FIXTURES
-SPECIFIC REGIONS MAY ALSO OFTEN COVER COSTS OF LEED PROJECT SUBMITTAL





With regard to green building, which of the following apply to you and/or your firm?

| | 2006 | 2004 | 2003 |
|---|---|---|---|
| Firm has attempted at least one project based on green-building principles | 45% | 47% | 49% |
| Firm has completed at least one project based on green-building principles | 36% | 41% | 34% |
| Firm has sought certification (LEED, Green Globes) for at least one project | 24% | 19% | 14% |
| **Firm has achieved certification (LEED, Green Globes) for at least one project** | **20%** | **13%** | **11%** |
| Respondent is a LEED Accredited Professional | 13% | 16% | 4% |
| Others in my firm are LEED Accredited Professionals | 37% | 35% | 25% |
| | **Base: 872** | **Base: 400** | **Base: 332** |

Reed Business Information.
BD+C White Paper Surveys, 09/03, 09/04, 09/06




*IMPLEMENTATIION OF GREEN BUILDING TECHNIQUES HAS BEEN RISING STEADILY, RESULTING IN BOTH INCREASED AWARENESS IN THE BUILDING PROFESSION AND THE GENERAL POPULATION, AND IN INCREASED BUSINESS FOR THOSE FIRMS AND CONTRACTORS WHO MAKE THE EFFORT TO PROMOTE GREEN BUILDING


STUDENTS AT WORK ON SITE; BALL STATE UNIVERSITY LAND LAB

## PLANET
## ENVIRONMENTAL BENEFIT

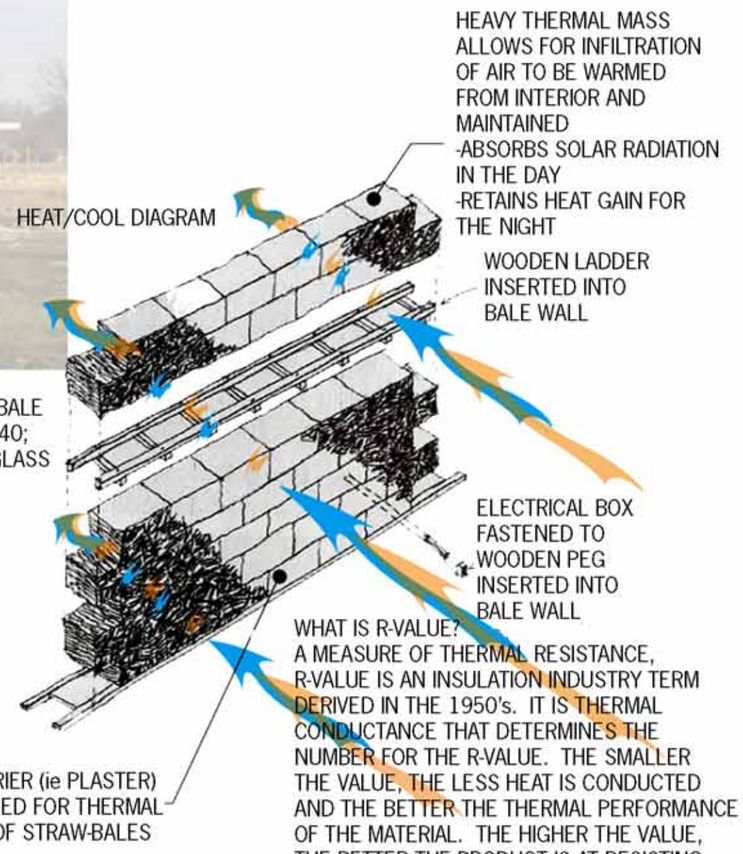
MATERIALS: EXTENSIVE LIST OF REUSED/RECYCLED MATERIALS COMMONLY USED IN STRAW-BALE CONSTRUCTION, RANGING FROM CONCRETE TO INSULATION, OR FROM LUMBER TO THE STRAW-BALES THEMSELVES
MAY INCLUDE: HIGH VOLUME FLY ASH CONCRETE (VERY INEXPENSIVE AND AVAILABLE, STRONGER, 6% FLY ASH USE IN U.S. WOULD RESULT IN USE OF 9 MILLION TONS ANNUALLY)
STRAW-BALES (WASTE MATERIAL, ALSO READILY AVAILABLE IN MANY REGIONS)
CELLULOSE (MADE FROM POST-CONSUMER PAPER)
STEEL, ALUMINUM, FIBER, AND RUBBER (ALL W/HIGH % POST-CONSUMER CONTENT)
STRUCTURAL FIBERBOARD, LAMINATED PAPERBOARD (VERY HIGH % RECOVERED MAT.)
POROUS PAVING PRODUCTS (REDUCE STORMWATER RUNOFF——> GROUNDWATER RECHARGE)
OSB/TJIs (OSB=REUSE MATERIAL, TJI=CONSERVATION OF LARGE CUT LUMBER)

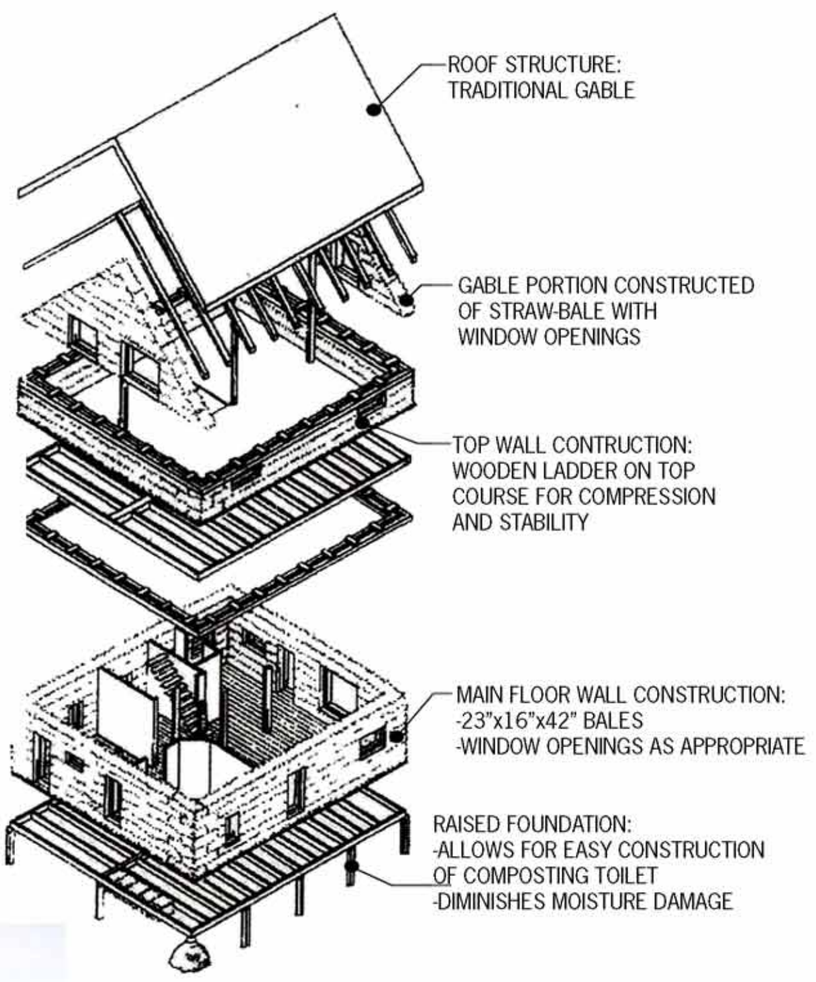
ADDITIONAL SUSTAINABLE ELEMENTS: THE USE OF PASSIVE SOLAR ENERGY, STORMWATER RETENTION TECHNIQUES, OR COMPOSTING TOILETS ARE COMMONLY IMPLEMENTED ALONGSIDE STRAWBALE CONSTRUCTION

## PEOPLE
## SOCIAL BENEFIT

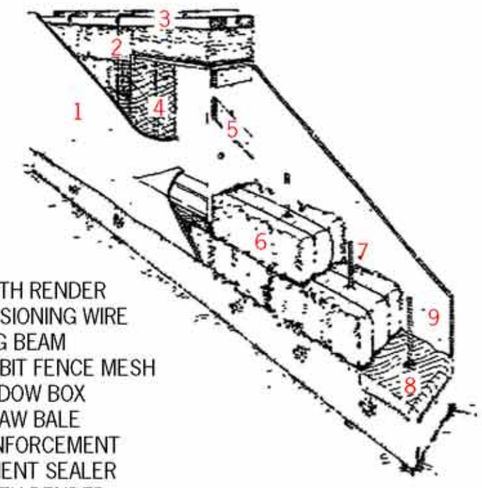
SHORT TERM POSSIBILITIES: A HIGHLY BENEFICIAL PSYCHOLOGICAL CONNECTION WILL BE CREATED BETWEEN BOTH YOU, THE BUILDER, AND THOSE FOR WHOM THE STRUCTURE IS BUILT AND THE LAND ITSELF ——> THE KNOWLEDGE, RESPECT FOR THE ENVIRONMENT, AND ELEVATED LEVEL OF CONSCIOUS STEWARDSHIP WILL BENEFIT ALL WHO ARE INVOLVED

LONG TERM REALITY: WIDESPREAD IMPLEMENTATION OF SUSTAINABLE BUILDING TECHNIQUES AND THEIR RESULTANT POSITIVE EFFECTS UPON BUILDING SITES WILL TRIGGER A REACTION THROUGHOUT SITES, COMMUNITIES, CITIES, AND REGIONS, WITH THE ULTIMATE GOAL OF CREATING A SUSTAINABLE WORLD ——> GOAL SET THROUGH ADDRESSING OF SYSTEMS AT THREE LEVELS:
1. OBJECT LEVEL: DESIGNING BUILDINGS AND SITES
2. SYSTEMS LEVEL: MANAGING SYSTEMS AND RESOURCES
3. META LEVEL: LEADING SOCIETY TO A SUSTAINABLE FUTURE




LOAD BEARING STRAW-BALE WALL SYSTEM




INTEGRATED WATER-WASTEWATER-ENERGY SYSTEM
FSEEC-LANDLAB AS BSU's FIRST GREEN BUILDING AND GREEN BUILT-SITE