



L U M A

S O U T H

GREEN BUILDING HANDBOOK

RESIDENT GREEN BUILDING HANDBOOK

A green building makes environmental and economic sense.



L U M A
S O U T H

WWW.LUMA-SOUTH.COM
SOUTH SALES CENTER
707 S. GRAND AVE.
213.622.5400

OUR COMMITMENT

The South Group is committed to responsible development in building design and construction. We have targeted a LEED™ (Leadership in Energy and Environmental Design) Certified or Silver rating from the U.S. Green Building Council for Luma, placing it among the first LEED certified residential buildings in downtown Los Angeles. The entire South development is pursuing LEED certification.

From the architect and contractor to the mechanical and electrical engineers, the project team diligently pursued an integrated design process to make Luma a model for environmentally-responsible residential building and a pleasant living environment for our residents.

Our goal is to educate you about the building's green elements and the building programs that are offered in keeping with the project's green building philosophy. This handbook summarizes the environmental design elements of Luma including a detailed outline of the measures implemented that contribute to achieving LEED certification.

We sincerely hope you will be inspired by the many benefits that are enjoyed by choosing energy and resource-efficient alternatives for the design and construction of your new home.

Index

- What is a Green Building? p. 4
- Here is What We Have Done at Luma p. 5
- Suggestions for Future Improvements p. 7
- Green Building Programs p. 10
- Transportation Opportunities p. 12
- More Suggestions for Green Living p. 13

Why is it Important?

- Buildings consume 40% of all material and energy flows
- Buildings and their construction consume 54% of all U.S. energy either directly or indirectly
- Buildings account for 35% of the CO₂ emissions in the U.S.

Green building practices provide the framework and tools to build in an efficient, healthy, and ecologically responsible manner.

WHAT IS A GREEN BUILDING?

- Considers the true costs of building and site impacts on the local, regional, and global environment through life-cycle costing and assessment
- Uses natural resources efficiently, maximizes the use of local materials, and eliminates waste
- Reduces building ecological footprints allowing ecosystems to function more naturally
- Optimizes climatic conditions through site orientation and design
- Uses energy-efficiency systems and materials
- Integrates natural daylight and ventilation and improves indoor air quality
- Plans for future flexibility, expansion, and building demolition
- Reduces, reuses, and recycles materials in all phases of construction and deconstruction
- Minimizes the use of mined rare metals and persistent synthetic compounds
- Conserves and reuses water and treats stormwater runoff on-site
- Encourages a transit-, bicycle-, and pedestrian-oriented project
- Includes advanced telecommunications technology allowing greater electronic access and reducing the need to travel
- Improves acoustics and reduces noise levels



HERE IS WHAT WE HAVE DONE AT LUMA

ENERGY EFFICIENCY

Luma was designed to reduce energy use by up to 15% over national standards through:

- High-efficiency water source heat pumps in units
- High-efficiency domestic hot water system
- High performance glazing to reduce solar heat gain
- Increased wall insulation throughout the building
- High-efficiency lighting systems
- Energy Star® appliances wherever possible
- Programmable thermostats for all regularly occupied spaces
- Building commissioning to verify and ensure that the entire building is designed, constructed, and calibrated to operate as intended

RESOURCE EFFICIENCY

- Interior recycling and sorting facilities for residents and tenants
- Recycled over 75% of construction waste materials
- Preference given to materials that contain recycled content and that are manufactured locally
- Preference given to materials that are extracted locally, which reduces the embodied energy associated with transportation

WATER EFFICIENCY

Luma was designed to reduce water usage over a base building by 30% through:

- Low-flow/ultra low-flow kitchen and bath fixtures
- Dual flush toilets

As you can see,

a great deal of time and effort has been spent by the project team in evaluating and incorporating as many environmentally responsible features as possible into the overall design of Luma.



We want to engage you, the homeowner, to follow the same basic environmentally responsible guidelines for any future work you may undertake in your home and explain to you the green building programs we have put in place which improve indoor air quality and resource-efficiency in the building. Each of you can do your part to keep Luma a healthy building for both yourself and your neighbors.

INDOOR AIR QUALITY

- Operable windows allow for natural ventilation
- Specified low-toxicity building materials and finishes to prevent persistent off-gassing
- Walk-off mats at main entries help prevent contaminants from entering the building
- Followed specific guidelines to contain dust and prevent contamination during construction
- Safer, environmentally-responsible janitorial services and a building-wide green cleaning program for residents

ENVIRONMENTAL RESPONSIBILITY

- Mixed-use, transit-supportive project: several bus lines, light rail, and subway in close proximity to the building
- Bicycle parking available for residential and retail tenants
- Flexcar™ vehicle located one block away, free one-year memberships for residents
- Environmentally-appropriate landscaping with drought-tolerant and native species
- A 50% reduction in potable water used for irrigation over baseline conditions
- No ozone depleting refrigerants used in building cooling system
- Compliance with dark sky requirements reduce light pollution from the site



SUGGESTIONS FOR FUTURE IMPROVEMENTS

There are many new and innovative techniques available that help us achieve energy savings in our buildings and help us create healthy homes. The focus for the Luma homeowner should be to preserve indoor air quality and resource efficiency during future remodeling projects. Here are some important suggestions:

INDOOR AIR QUALITY

Adhesives and sealants off-gas quickly and the volatile chemicals may re-deposit in carpet, fabrics, or unpainted drywall.

- Use low-toxicity adhesives for installation of all building materials requiring adhesives including ceramic tile, linoleum, vinyl flooring, carpet base, wall coverings, and counter tops
- Use adhesives with the lowest VOC content possible and a maximum of 250 g/l
- Use low-toxicity, water-based siliconized acrylic caulk (painter's caulk) for interior moisture and air sealing and low-toxicity mastic for sealing HVAC ductwork

Interior paints and wood finishes. Many companies now manufacture solvent-free latex paints in a variety of colors and surfaces (flat or semigloss).

- Use paints and primers that meet the emission and chemical component requirements according to Green Seal Standard GS-11:
 - Non-flat sheen: 150 g/l VOC max
 - Flat sheen: 50 g/l VOC max

Resources for Low-VOC Paint

Green Seal

Independent organization that provides environmental certification standards
www.greenseal.org

American Formulating & Manufacturing (AFM) Safecoat Enamels

Low-odor, zero-VOC paints with no formaldehyde, ammonia, crystalline silica, or ethylene glycol
800.239.0321
www.afmsafecoat.com

Kelly-Moore

Manufacturers of low and zero-VOC paints
800.874.4436
www.kellymoore.com

Fraze Paint - EnviroKote

Interior low-odor, low-VOC paints
800.477.9991
www.frazeepaint.com

Spectra-tone Paint Company

Gold Label Premium Enviro interior zero-VOC paints
800.272.4687
www.spectra-tone.com

Sherwin-Williams

Manufactures Harmony, a zero-VOC, low-odor, solvent-free paint
503.760.8233

Resources for Carpet and Flooring

Carpet and Rug Institute
Database of products meeting the CRI IAQ Green Label standards
www.carpet-rug.com

Green Guard
www.greenguard.org

American Bamboo Society
www.americanbamboo.org

Forest Stewardship Council
Locate a supplier of FSC-certified wood products
www.fscus.org

Forbo Flooring
Marmoleum dealer
www.forboflooringna.com

Resources for Finishes

Skyside Studios
20 C Pimentel Court, Suite 8
Navato, CA 94949
415.883.9455
www.skysidestudios.com

Purebond™
Formaldehyde-free hardwood plywood for veneer-cores
Columbia Forest Products
800.237.2428

SkyBlend Particleboard Panel
Particleboard using phenol formaldehyde resins
Roseburg Forest Products
541.679.3311
www.teamrfpco.com

Carpet and carpet pad. Many indoor air quality complaints have been traced back to chemicals that can off-gas from new carpet systems or biological pollutants. Low-toxicity commercial grade carpet systems and cleaning regimens are available from several manufacturers.

- Specify carpet with the Carpet Research Institute's (CRI) Green Label or choose natural fibers such as wool carpet

Finish flooring. Consider low-VOC or rapidly renewable alternatives to vinyl composition flooring.

- Consider a natural linoleum, such as Marmoleum™, which is made from natural materials including ground cork, limestone, pigment, and linseed oil and does not off-gas any petroleum-based harmful or irritating chemicals
- Use vinyl tile flooring which does not contain the plasticizers or softening chemicals found in sheet vinyl
- Consider Forest Stewardship Council (FSC)-certified hardwoods for flooring
- Use bamboo flooring – bamboo is a beautiful, durable, and rapidly renewable material

Furniture and furniture fabrics may be a source of irritating chemicals from pre-finished fabrics or cushioning. Low-toxicity options are available.

Built in cabinets and shelving. To eliminate formaldehyde off-gassing, avoid particleboard substrate materials in cabinets and shelving. Look for wheatboard, formaldehyde-free MDF (Medium Density Fiberboard), or hardwood plywood.

RESOURCE EFFICIENCY

Many products made today, from steel to drywall to carpet, contain post-consumer and/or post-industrial material.

- Use materials with high amounts of recycled content
- Reduce the embodied energy of materials used by purchasing locally fabricated materials
- Use other environmentally friendly materials including bamboo, linoleum, and wood from forests that practice sustainable forestry management – look for wood with the FSC designation
- Think ahead and use components that can be easily salvaged and reused in the future. For example, many types of glue used in cabinetry render the wood unsalvageable, whereas metal fasteners that can be separated from the wood allow both components to be recycled
- Reduce, reuse, or recycle demolition materials to the extent possible
- Choose Energy Star rated appliance and fixtures for any replacements for additions to your home. Look for the Energy Star logo.

ENVIRONMENTAL RESPONSIBILITY

Follow the green cleaning and programs as outlined in the following section as your contribution to Luma's environmentally-friendly operations agenda.

Resources for Conservation

Energy Star

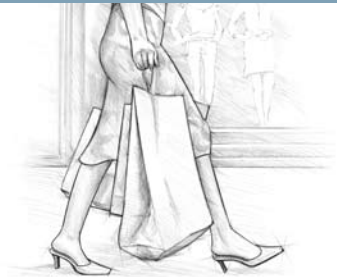
www.energystar.gov

City of Los Angeles, Bureau of Sanitation/Recycling

Guidelines for Construction

and Demolition Recycling

www.lacity.org/san/solid_resources/special/index.htm



Resources for Green Cleaning

Coastwide Laboratories
 Leading manufacturer of people- and planet-friendly cleaning products in the Northwest
 800.775.3289
www.coastwidelabs.com

GREEN BUILDING PROGRAMS

We are excited to offer you several important programs in keeping with the green building philosophy that was a key component of the construction process.

GREEN CLEANING PRODUCTS PROGRAM

Environmentally responsible cleaning is the use of products and/or processes that reduce or eliminate any negative impact of cleaning on human health and on the environment. Conventional cleaning products often contain ingredients that are harmful to humans and the environment.

In keeping with our collective environmental consciousness, a partnership has been formed with Coastwide Laboratories, the leading manufacturer of people- and planet-friendly cleaning products in the Northwest, for the provision of environmentally-friendly cleaning supplies and products. Two spray bottles and 3 packets, of two different cleaners, are being provided to each homeowner upon move-in.

Included with your move-in materials are summary sheets on the two products being provided. The first product, SE 61, is a glass and surface cleaner. The other product, SE 64, is light yellow in color and is a pH neutral all-purpose cleaner. Following is a summary of which product to use for different cleaning tasks:

- Glass and Mirrors SE 61
- Light Cleaning of Walls, Countertops, Cabinets SE 61
- Marble Surfaces and Wood Floors SE 64
- Carpet Spot Cleaning SE 64
- Tub, Sink, and Toilet Cleaning SE 64
- Heavy Wall Cleaning and Kitchen Degreasing SE 64



The cleaners are most effective if they are allowed to maintain contact with the soiled surface for a few moments before you scrub or wipe. For light duty cleaning, spray or pour cleaner directly on a wiping cloth. This prevents cleaner from being inhaled and gives better control near delicate surfaces.

Each packet makes enough cleaner to fill your quart-size spray bottle. Please follow the dilution instructions printed on the packet. A reorder flyer and contact information for Coastwide is included in your move-in materials.

Also, keep in mind that dusting with lint-free damp or micro-fiber cloths, folded like a handkerchief to expose multiple sides for absorbing dust, will prevent stirring dust particles into the air where people can inhale the particles.

By using these products, you will help maintain a healthy home environment for yourself and your fellow residents.

BUILDING RECYCLING PROGRAMS

Recycling is an essential component of our building operation program. The building was specifically designed with a separate recycling room located on the ground floor of the building across from the trash room. Materials that can be recycled will be collected in separate containers that will be labeled accordingly. We hope the convenience of this facility will encourage you to recycle regularly.

Resources for Recycling

City of Los Angeles, Bureau of Sanitation/Recycling

Find information on recyclable items

213.473.7878

www.lacity.org/san/solid_resources/special

Earth 911

www.earth911.org

EPA

www.epa.gov/msw/recycle.htm

National Recycling Coalition

Learn where to recycle the most unusual items

www.epa.gov/epaoswer/non-hw/muncpl/reduce.htm



Resources for Transportation

Metro

800.COMMUTE

www.mta.net

Metro Rapid On Your Cell

Website designed to send up-to-date arrival times to your cell phone

www.rapidbus.net

DASH

www.ladottransit.com/dash

Commuter Express

www.ladottransit.com/comexp

Flexcar

213.482.FLEX

www.flexcar.com

TRANSPORTATION OPPORTUNITIES

Take advantage of the various transit options available to get around town. Luma is located at the confluence of numerous bus lines, several light rail lines, and subway routes. Plan your trip, check fares, or even purchase tickets at Metro's website listed in the sidebar. DASH and Commuter Express routes and schedules are also available online.

Consider riding your bicycle instead of driving or taking transit. If you have purchased a storage unit, your bicycle can be stored there, or the utility room in your unit can also accommodate a bicycle.

Flexcar and The South Group have partnered to encourage car-sharing at Luma. Flexcar has placed a car-sharing vehicle near Luma and has several other vehicles in the downtown Los Angeles area. To sign up to use Flexcar and to find out more about this unique program, visit Flexcar's website listed in the sidebar.

MORE SUGGESTIONS FOR GREEN LIVING

Energy conservation. There are some simple steps you can take in your home to reduce energy consumption and save on utility bills.

- Choose Energy Star rated appliances and fixtures for any replacements or additions to your home
- Turn off appliances, lights, TVs, and computers when not in use
- Use your programmable thermostat to automatically turn down the temperature at night and when no one is home
- Choose Energy Star compact fluorescent lights bulbs which use 75% less electricity and last ten times longer than conventional incandescent bulbs
- On hot, sunny days and cold, winter days, close your drapes and blinds during the day when no one is home to better control the temperature in your interior environment

Water conservation. By using water more efficiently, you save energy and reduce your water bill.

- Run the dishwasher and washing machine only when they are full
- Turn off running water as often as possible while doing household chores such as cleaning
- Minimize use of the garbage disposal which requires water to operate
- Ensure your household uses the dual flush toilet appropriately

Resources for Energy Conservation

Energy Star

www.energystar.gov

Energy Guide

Find energy efficient products, analyze your energy use, and learn about conservation
www.energyguide.com

Water-Use It Wisely

Tips to save water
www.wateruseitwisely.com



Thank you for taking the time to read about the energy and resource-efficient elements of Luma. We appreciate your commitment to choosing similar materials for any future work in your home and participating in the environmentally responsible programs we have implemented and encourage you to follow.

Each step we take in creating healthy, green spaces in which to live and work helps to preserve precious natural resources and has an enormous impact on the ecological well-being of our neighborhood, our community, and our world.



THE SOUTH GROUP

www.exploresouthgroup.com

