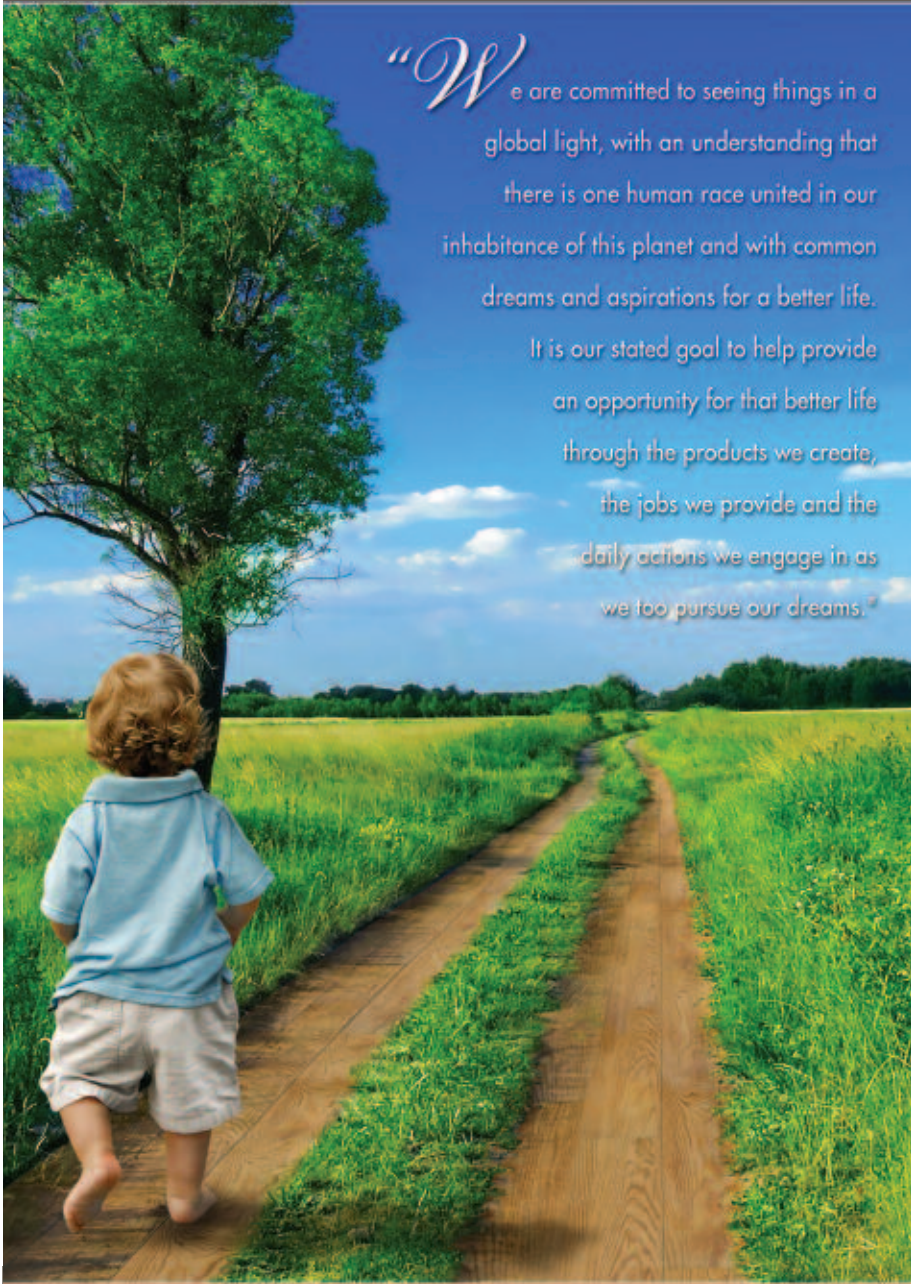


## OUR SUSTAINABILITY MISSION

*“We* are committed to seeing things in a global light, with an understanding that there is one human race united in our inhabitation of this planet and with common dreams and aspirations for a better life. It is our stated goal to help provide an opportunity for that better life through the products we create, the jobs we provide and the daily actions we engage in as we too pursue our dreams.”



**HALSTEAD**  
INTERNATIONAL

## HALSTEAD INTERNATIONAL



### HALSTEAD INTERNATIONAL CUSTOMER SUPPORT CENTER Embracing Renewable Resources



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# LEED® Facts and Scorecard



Halstead International  
Customer Support Center  
Calhoun, Georgia

“Initially, we went into this project looking to build a new building that exemplified our commitment to sustainability and to sustainable building practices. During the process we got excited when we realized we could generate most, if not all, of our electric and water needs ourselves.”

Harlan Stone  
Halstead International

**90%** less energy use

**89%** less water use

**66%** construction waste  
diverted from the landfill

## PROJECT BACKGROUND

The construction of the Halstead Customer Support Center building reflects the mission of the organization — to promote more livable and sustainable communities. The project demonstrates what can be achieved in energy-, water- and resource-efficiency within the commercial building sector. Halstead International has created an attractive and comfortable, energy-efficient workplace using sustainable materials with a long-term cost benefit. Attention to energy- efficiency has reduced operating costs significantly, making it one of the most energy-efficient office buildings in the nation. Halstead's building is Georgia's Tenth LEED Platinum project and the first for the city of Calhoun, GA.

Head Contracting Company:	Integra Construction, Inc
Architect:	Christopher Hatfield / The NELSON Southeast Operating Co. LLC
Interior Design:	The NELSON Southeast Operating Co. LLC
Mechanical Engineer & Contractor:	2010 Engineering Group LLC
Electrical Contractor:	Industrial Control System
Civil Engineers:	Travis Pruitt Associates
Landscape Architect:	The NELSON Southeast Operating Co. LLC
Project Size:	4,620 sq. ft.
Cost Per Square Foot:	\$275
LEED Rating:	Platinum

## LEED® Facts

Halstead Customer Support Center  
Calhoun, Georgia

LEED for New Construction v2.2  
Certification awarded October, 2011

**Platinum 53\***

Sustainable Sites	9/14
Water Efficiency	5/5
Energy & Atmosphere	15/17
Materials & Resources	5/13
Indoor Environmental Quality	14/15
Innovation & Design	5/5

\*Out of a possible 69 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

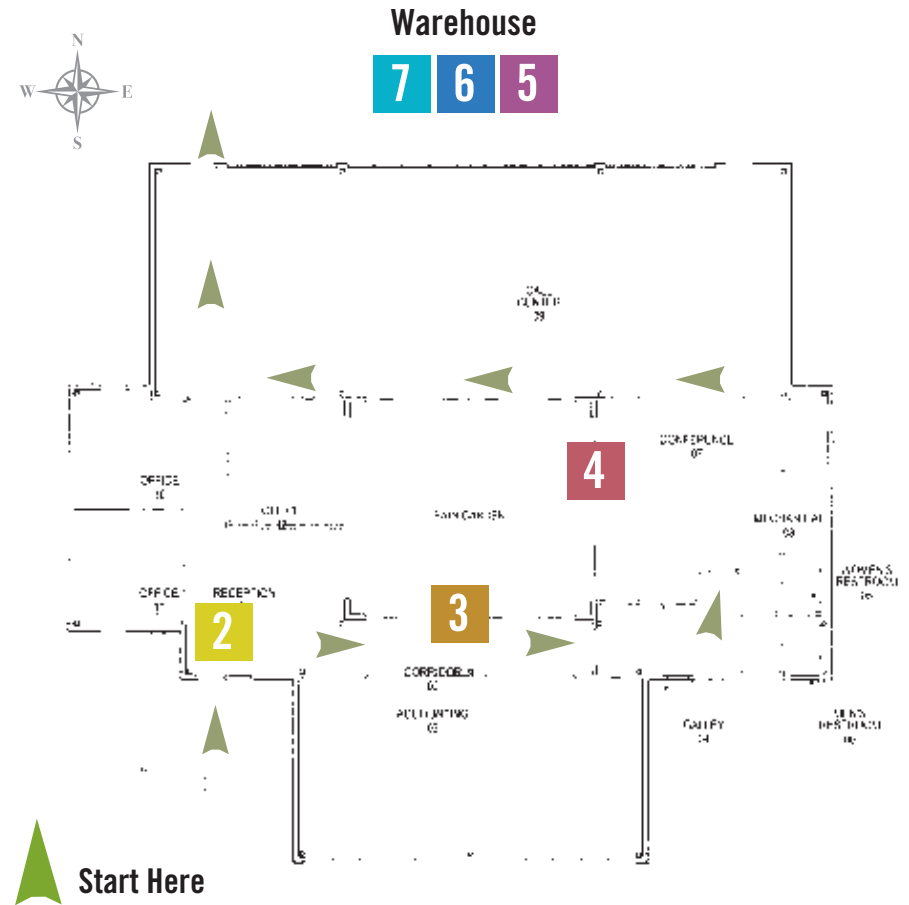
HALSTEAD INTERNATIONAL CUSTOMER SUPPORT CENTER  
**Embracing Renewable Resources**



Welcome to the Halstead International Customer Support Center here in Calhoun, GA. We are pleased you could join us to learn how this building has earned the prestigious LEED® green building certification. LEED (Leadership in Energy and Environmental Design), established by the U.S. Green Building Council and verified by the Green Building Certification Institute (GBCI), is the nation's preeminent program for the design, construction and operation of high performance green buildings.

This brochure will guide you as you tour around the grounds, the interior and the adjacent warehouse, highlighting the green features that helped the Support Center to achieve a LEED Platinum certification. From the landscaping outside, through the naturally daylit interior offices and to the rainwater catchment system located in the warehouse, you will witness first hand the innovative technologies and natural treatments at work to conserve our precious resources, and put sustainability and health first and foremost in our lives.

Thank you and enjoy the tour.



- 1** Landscaping
- 2** Indoor Environment
- 3** Rain Garden
- 4** Green Living Roof
- 5** Recycling & Manufacturing Best Practices
- 6** Solar Energy
- 7** Rainwater Harvesting System



# STOP #1

## Landscaping



The landscaping surrounding the facility and featured in the interior courtyard consists of hardy, drought-resistant native plants. These plants naturally treat, cool and filter runoff rainwater before it returns to the local aquifer. The natural filtration helps replenish our planet's limited supply of fresh water using environmentally safe, clean methods. The choice of plants and the landscape design further reduces water use for irrigation by half.

The landscaping is part of an overall water treatment system and stormwater management plan that helps to control stormwater runoff. It includes the landscaping you see here, green living roofs and a rainwater harvesting system located in the warehouse. These components help limit the disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration and reducing or eliminating pollution from stormwater runoff. The implemented stormwater management plan has resulted in a 30.85% decrease in runoff from calculated pre-project conditions.

Through the use of rainwater harvesting, the installed irrigation systems reduce potable water consumption by 100% in landscape use, and 68.1% overall.

You will learn more about the landscape features of the property and our rainwater harvesting system by visiting Stops 3, 4 and 7 along the tour.

# STOP #2

## Indoor Environment



EED requirements address a host of elements that can affect human health in the built environment. The facts below touch on a few areas where the Customer Service Center improves the indoor spaces in terms of air quality, thermal comfort and the well-being of its occupants:

- The use of low VOC (volatile organic compounds) and no-formaldehyde building materials reduces pollutants and harmful chemicals that could lead to health problems
- 20% of the flooring in the building is Halstead's own Floorscore-certified flooring product, also contributing to better indoor air quality
- All the furniture in the building is Greenguard Certified and regionally sourced, reducing indoor air contaminants and environmental impacts resulting from transportation
- Controllable windows increase ventilation and special MERV filters installed in the building's HVAC (Heat, Ventilation and Air-Conditioning) systems minimize exposure to potentially hazardous particulates and pollutants
- Daylight and views are available to 100% of all regularly occupied areas, providing a connection between indoor spaces and the outdoors, and contributing to comfort and productivity

## STOP #3

# Rain Garden



**P**eer out into the courtyard and you will see another beautiful and environmentally friendly method of capturing and filtering rainwater, preventing it from entering the local storm sewer system without treatment.

A rain garden is a shallow depression that is planted with deep-rooted native plants and grasses. Hardy native plants absorb water as their roots help water and nutrients infiltrate deep into the soil. Once the water seeps below the plants' roots, it runs through 12 feet of specially mixed biomass soil which further breaks up the pollutants and acts as a natural filter.

### WHY A RAIN GARDEN?

Stormwater runoff flows over roofs, driveways and lawns, down the street, into the storm drain directly to our rivers and lakes. This untreated stormwater carries pollutants like oil, salt, fertilizer, pesticides, transportation chemicals and all sorts of other things that shouldn't be in our freshwater. A rain garden can capture that runoff and hold thousands of gallons of rain-water, delaying its entry back into the sewer system and reducing the amount of pollutants that contaminate our waterways.

## STOP #4

# Green Living Roof



**O**therwise known as an eco-roof or live roof, a Green Living Roof absorbs storm water until the plants and soil become saturated, at which point water begins to flow from the rooftop.

As with the rain garden, the absorption of the water into the planted roof helps to filter runoff water naturally. The gutters on the edge of the green roof then channel the runoff down to the ground through the use of rain chains that slow the flow of water as it is absorbed into the surrounding landscape.

To spot the Green Living Roof, look out into the rain garden, then up to your right. There are two more green roof locations you may have noticed at the front of the building as well.

### A GREEN LIVING ROOF:

- Filters pollutants and heavy metals out of rainwater and helps to filter pollutants and carbon dioxide from the air we breathe
- Can reduce energy for heating and cooling, foster natural habitat, and help insulate the building for sound
- Delays storm water from entering the municipal sewage treatment systems, helping to ease the burden on the combined systems operating in many American cities

# STOP #5

## Recycling & Manufacturing Best Practices



During the construction of the Customer Service Center, 13.69 tons of construction waste was recycled, diverting 66.4% of total on-site generated waste from a landfill. Halstead also chose building materials with a high recycled content which made up 30.3% of the total materials cost of the building.

This area of the property is designated as the recycling center. Being able to recycle more than half the amount of waste created during construction was made easier in part because of Halstead's already existing recycling program.

Balers make recycling easier and help reduce labor costs associated with it. The baler on the property can bale up to 1000 lbs of used cardboard boxes, paper, plastic and even nonferrous metals into a 60" x 30" x 48" bale for easy and proper disposal.

Many of Halstead's flooring products feature roughly 15-25% recycled content. Halstead's policy is to take back its used flooring and recycle it for use in new flooring products. The warehouse receives, stores and distributes the old used flooring in the form of supersacks (pictured above) for shipment to the factories, which are equipped to recycle at least 15% of old flooring in with the new.

# STOP #6

## Solar Energy



Solar energy is a clean renewable energy that captures sunlight and converts it to electricity through photovoltaic (PV) panels. Since it is paid for initially, it is a fixed cost, whereas other energy sources have continually rising energy costs over the years. Adding solar panels for electricity reduces our exposure to growing energy costs and reduces our carbon footprint.

### THE USE OF SOLAR PANELS:

- Will inevitably reduce energy costs and help protect against rising "on-the-grid" rates
- Will help reduce environmental impacts by switching away from the grid's more conventional energy sources as well as feeding energy back to the grid when the system produces more than the building needs

The installed solar system provides at least 35% of the Customer Service Center's electrical needs. The solar panels are located on the roof of the warehouse, but service the new building only. The PV panels are made by Suniva Inc. in the USA and contain 90+% U.S.-made content. Overall, the Customer Service Center has reached a 90.1% energy consumption reduction compared to the baseline building performance rating. Renewable site-generated energy has offset the building's energy cost by 87.45%.

### THERE ARE FOUR MAIN COMPONENTS TO A SOLAR PANEL SYSTEM:

- **PHOTOVOLTAIC (PV) PANELS** — the bulk of the system that does all the hard work of collecting sunlight and converting it to energy
- **ROOF RACKS AND MOUNTING SYSTEM** — hold the panels to the roof, even in 200mph winds
- **INVERTER AND BATTERY SYSTEM** — Inverters convert the direct current (DC) collected by the PV panels into AC for use in a building. Batteries provide a place to store the energy, if not connecting to the grid
- **THE MONITORING SYSTEM** — usually an LCD display that allows you to view information about the system

A rainwater harvesting system is designed to conserve water and save natural resources. It does so by:

- Accumulating and storing stormwater runoff for reuse before it reaches the local aquifer
- Offsetting demands on municipal and private water supplies for potable water resources

The Rainwater harvesting system located here collects water from the warehouse roof and pipes it through a filter and treatment system to two corrugated steel tanks or cisterns, each having a 6,500 gallon capacity. The stored water is then used for landscape irrigation and flushing toilets for both buildings.

The warehouse roof offers about 30,000 square feet of surface area from which rainwater is collected. When rain falls, it immediately picks up pollutants from rooftops and pavement, which are then carried through storm drains and into streams. Collecting stormwater from rooftops so it can later be used for irrigation or flushing decreases the volume and rate of runoff and reduces runoff pollution.

The system is part of an overall water strategy for the property, which also includes dual-flush toilets, low-flow faucets and native landscaping. Through the use of rainwater harvesting, the installed irrigation systems reduce potable water consumption by 100% in landscape use, and 68.1% overall.



## A COMPLETE RAINWATER HARVESTING SYSTEM HAS FOUR BASIC COMPONENTS:

- **FILTRATION:** A filter keeps rooftop debris from entering the storage tank, or cistern.
- **TREATMENT:** A treatment system treats the water for contaminants, disinfecting it before it is distributed.
- **STORAGE:** Above-ground steel cisterns are used in this system. If there is too much rain, a valve directs the overflow to an outdoor spillway
- **DISTRIBUTION:** A self-contained pumping system is designed to deliver the equivalent flow and pressure of city water systems or better.

This completes our Green Tour.  
Thank you for joining us.

# Glossary of Terms



## Halstead International Group

Halstead International Group is a global manufacturing and marketing enterprise servicing North American, South American, Pacific Rim and European markets. The company produces a comprehensive line of high-quality flooring and decorative building surfaces for the home and workplace. With headquarters in Norwalk, CT., and associated offices throughout the world, Halstead is continuously developing new and innovative products for the marketplace while promoting safe and sustainable processes for doing business.

## USGBC (U.S. Green Building Council)

The U.S. Green Building Council is a non-profit organization dedicated to sustainable building design and construction. It is made up of a community of leaders working to make green buildings available to everyone within a generation. USGBC also developed the LEED building rating system. Learn more about the USGBC and its LEED rating system at [www.usgbc.org](http://www.usgbc.org).

## Green Building Certification Institute (GBCI)

"The Green Building Certification Institute (GBCI) is a non-profit organization that recognizes excellence in green building practice and performance globally through its third party certification services and professional credentials supporting market transformation." From the site: [www.gbci.org](http://www.gbci.org)

## LEED (Leadership in Energy and Environmental Design)

The LEED® green building certification system™ is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S. Green Building Council's website at [www.usgbc.org](http://www.usgbc.org) to learn more about LEED and green building.

## LEED Platinum rating

Platinum certification is the highest certification available for USGBC's LEED (Leadership in Energy and Environmental Design) rating system.

## LEED Facts, the "nutrition label" score card

The LEED scoring system is broken up into 6 categories. The categories are as follows: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Environmental Quality and lastly, Innovation & Design Process. Credits exist within each category that a project can attain in order to reach a certain level of certification.

## VOCs (volatile organic compounds)

Volatile organic compounds are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors.

## Floorscore Certification

FloorScore® was developed by the Resilient Floor Covering Institute (RFCI) together with Scientific Certification Systems (SCS) to test and certify flooring products for compliance with indoor air quality emission requirements adopted in California.

FloorScore® IAQ Certification means that a flooring product has been independently certified by SCS to comply with the volatile organic compound emissions criteria of the California Section 01350 Program. Any product that has met these stringent standards is a product that will contribute to good indoor air quality.

## Greenguard Certification

From the website: "The GREENGUARD Environmental Institute (GEI) certifies products and materials for low chemical emissions and provides a resource for choosing healthier products and materials for indoor environments. All certified products must meet stringent chemical emissions standards based on established criteria from key public health agencies. GREENGUARD Certification is broadly recognized and accepted by sustainable building programs and building codes worldwide." To learn more about Greenguard certification go to [www.greenguard.org](http://www.greenguard.org).

## MERV air filters

MERV or Minimum Efficiency Reporting Value is an expression of the filtering efficiency of an air filter that has been evaluated using the ANSI/ASHRAE Standard 52.2 Test Procedure. The filters in the Halstead Support Center feature the highest MERV rating on the market.

## HVAC (Heat, Ventilation and Air-Conditioning)

Refers to the technology of indoor environmental comfort. The main purposes of a Heating, Ventilation, and Air-Conditioning (HVAC) system are to help maintain good indoor air quality through adequate ventilation with filtration and provide thermal comfort.

## Thermal comfort

A term used to define the state of mind in humans that expresses satisfaction with the surrounding environment. Maintaining this standard of thermal comfort for occupants of buildings or other enclosures is one of the important goals of an HVAC (heating, ventilation, and air conditioning) system.

## Grid

Grid is used here to refer to an electrical network such as a local utility's transmission grid or distribution grid. An electrical grid is an interconnected network for delivering electricity from suppliers to consumers.