

Multifamily Affordable Housing that is Healthy, Efficient, Cost Effective and LEED Platinum



September 27, 2016

No more asthma?!

Learning Objectives

- Analyze the strategies used to achieve low energy costs, HERS scores in the 40's and long term value.
- Identify approaches to build healthy housing that residents appreciate and desire.
- Evaluate the lessons learned, challenges and preferences for subs and project teams.
- Discuss the potential next steps for multifamily affordable housing to take it to the next level.

Projects

- Cardona
- Rosslare
- Summerhill
- Bandon River
- Valencia
- Carlow
- Kinsale Place
- Vineyard at Broadmore
- 12th and River
- The Springs
- The Grove at Riverside
- Ross Island



Characteristics in Common

- All are located in Idaho, mostly rural
- Most are 3-story, 48-unit projects
- All are LEED Platinum
- All are affordable and tax-credit through QAP
- Some are senior, some are family
- Climate Zones 5 and 6
- Moderate to high radon risk



Cardona

- First LEED certified multifamily project in Idaho (2008)
- Developer began with a focus on air infiltration and waste reduction
- Challenges with building department

PROJECT PROFILE



The image shows a two-story apartment building with light-colored horizontal siding and dark railings on the balconies. The building is set against a clear blue sky with some distant mountains visible in the background. A parking sign is visible in the foreground.

U.S. GREEN BUILDING COUNCIL
LEED
USGBC

CARDONA APARTMENTS
CHUBBUCK, IDAHO

15 units per acre

99.5% of construction waste diverted from landfills

48 homes available for low-income seniors

LEED Facts
Cardona Apartments
Chubbuck, Idaho

LEED for Homes
Certification Awarded: March 24, 2010

Platinum	89*
Sustainable Sites	17.5/22
Water Efficiency	7/15
Energy & Atmosphere	21.5/38
Materials & Resources	16/16
Indoor Environmental Quality	10/21
Innovation & Design	7/11
Awareness & Education	3/3
Locations and Linkages	7/10

* Out of a possible 136 points

Long Term Value

“LEED seems to us to be the most holistic from pre-construction to construction and more importantly long term sustainability. Our affordable apartment communities are designed to operate as such for a period of 40-50 years... what you build needs to be for the long term. We very much like the 3rd party certification processes.” – *Tom Mannschreck, President and CEO of Thomas Development Co.*

“Yes it does cost more. Is it worth it? Absolutely.”

“Operating costs are significantly smaller.”

“New math in the development business.”

“Decreased resident turnover.”

Tom had chronic asthma as a child. He brought LEED to the QAP.

12th and River

- Highest LEED for Homes score of 102.5
- Urban infill in Boise
- Very high density
- 56 HERS Score
- U-0.27 windows
- Heat pumps



Valencia and The Grove

- Lowest HERS scores of 48



HERS Scores

Project	Location	HERS score	Year Built
Cardona	Chubbuck	85	2008
Rosslare	Idaho Falls	69	2009
Summerhill	Idaho Falls	52-55	2011
Bandon River	Idaho Falls	51	2014
Valencia	Fruitland	48	2015
Carlow	Rexburg	53	2016
Kinsale Place	Lewiston	54 (est)	2017
Vineyard at Broadmore	Nampa	67	2013
12 th and River	Boise	56	2012
The Springs	McCall	n/a	2011
The Grove at Riverside	Rexburg	48	2015
Ross Island	Emmett	50 (est)	2017



Energy Efficient

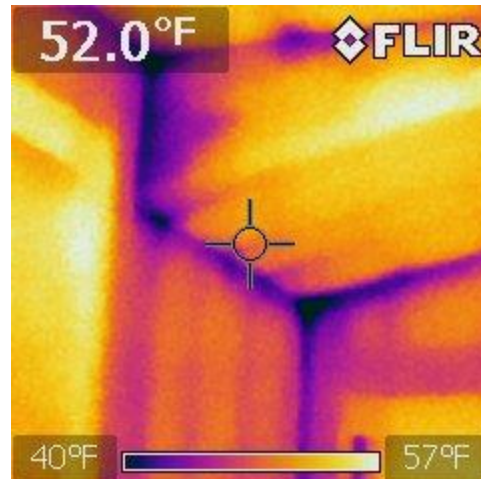
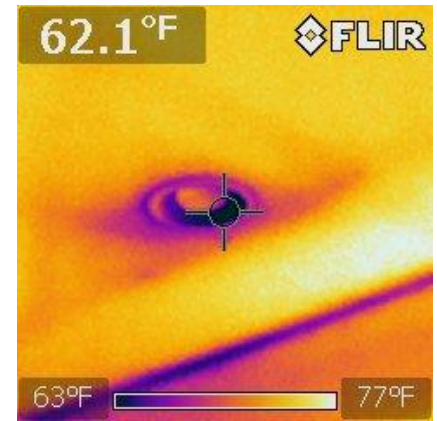
Strategies to Save Energy

1. Focus on thermal envelope
2. Duct sealing
3. 90-100% CFLs or LEDs
4. ES appliances
5. Efficient HVAC equipment



Thermal Envelope Strategies

1. Advanced framing techniques
2. Air sealing to below 4ACH50
3. Insulate to NW ENERGY STAR
4. Window U-factors of 0.27-0.29



Efficient Lighting Strategies

1. CFL to start
2. Transitioned to LED over last 1-2 years
3. Now preferring built-in LED can lights that are surface mounted



Efficient HVAC Strategies

1. Most either high efficiency gas furnace (94+) or heat pumps
2. Debate over tankless or tank water heaters
3. Good ventilation strategies per LEED/ASHRAE
4. Most have transitioned to ERV/HRV

Lessons Learned

- Maintenance is a concern in rural areas
- Resident education is important



Long Term Value

“From \$250 per month to \$50!” – *resident of The Grove at Riverside*





Healthy

Strategies to achieve Healthy Homes

LEED for Homes

EPA Indoor Air Plus



Qualified homes earn the Indoor airPLUS label. Place it next to the ENERGY STAR label.



All Indoor airPLUS qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.



Leadership in Energy and Environmental Design

A leading-edge system
for certifying the
greenest performing
buildings in the world



LEED® Facts
Building size 12,500 square ft
Type of building
LEED for Core & Shell Development
Certification awarded July 27, 2006

Platinum	49*
Sustainable Sites	13/15
Water Efficiency	5/5
Energy & Atmosphere	12/15
Materials & Resources	6/9
Indoor Environmental Quality	10/13
Innovation & Design	3/5

*Out of a possible 62 points



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LEED is a Seal of Quality



LEED is a Seal of Quality

For residents, LEED is a seal of quality, providing peace of mind that they are living in a home designed to deliver fresh air indoors and improved water and energy efficiency.



39%

of Certified LEED Homes are
Affordable Homes

***As of March 2009**

As reported at time of registration. For affordable project funding eligibility guidelines, please visit www.usgbc.org/homes.

The EPA Estimates...

We spend **90%** of our time indoors.

Durability Plan

Review and Select
Strategies

Management

Inspection



Durability Inspection Checklist Template (for prerequisite ID 2.1 & 2.2 and credit ID 2.3)

Builder Name:
Project Team Leader:
Home Address:

For each risk type below, list the durability strategies used in the home to help mitigate those risks. For each of the high and moderate risk areas indicated in the Risk Evaluation Form, please include at least three strategies. Where necessary, add additional rows. Refer to the Example Durability Strategies page for sample strategies that may be applicable.

Have the builder or trade indicate where the strategy is included in the drawings, specification, or scopes of work, and then sign-off that the durability strategies were incorporated into the home. If ID 2.3 is being pursued, have the Green Rater sign-off that the strategies were verified in the home.

Durability Strategies by Issue Type	Location in Drawings, Specifications, and/or Scopes of Work	Sign-off by Responsible Party (initial below)	
		Prerequisite ID 2.2 (Builder/Trade)	Credit ID 2.3 (Green Rater)
Exterior Water / Moisture			
Interior Water / Moisture			
Air Infiltration			
Interstitial Condensation			
Pests			
Heat Loss			

Indoor Moisture Control Measures

Table 1. Indoor Moisture Control Measures

Location or equipment	Required moisture control measure
Tub, showers, and spa areas	Use nonpaper-faced backer board on walls.
Kitchen, bathroom, laundry rooms, and spa areas	Use water-resistant flooring; do not install carpet.
Entryway (within 3 feet of exterior door)	Use water-resistant flooring; do not install carpet.
Tank water heater in or over living space	Install drain and drain pan.
Clothes washer in or over living space	Install drain and drain pan, or install accessible single-throw supply valve.
Conventional clothes dryer	Exhaust directly to outdoors.
Condensing clothes dryer	Install drain and drain pan.

Indoor Environmental Quality (EQ)

1.0 Indoor airPlus

2.0 Combustion Venting

4.0 Outdoor Air Ventilation

5.0 Local Exhaust

6.0 Distribution of Space Heating and Cooling

7.0 Air Filtering

8.0 Contaminant Control

9.0 Radon Protection

10.0 Garage Pollution Protection

EPA Indoor airPLUS



Qualified homes earn the
Indoor airPLUS label.
Place it next to the
ENERGY STAR label.



All Indoor airPLUS qualified homes meet strict
guidelines for energy efficiency set by ENERGY STAR,
the nationally-recognized symbol for energy efficiency.



Indoor airPLUS Verification Checklist



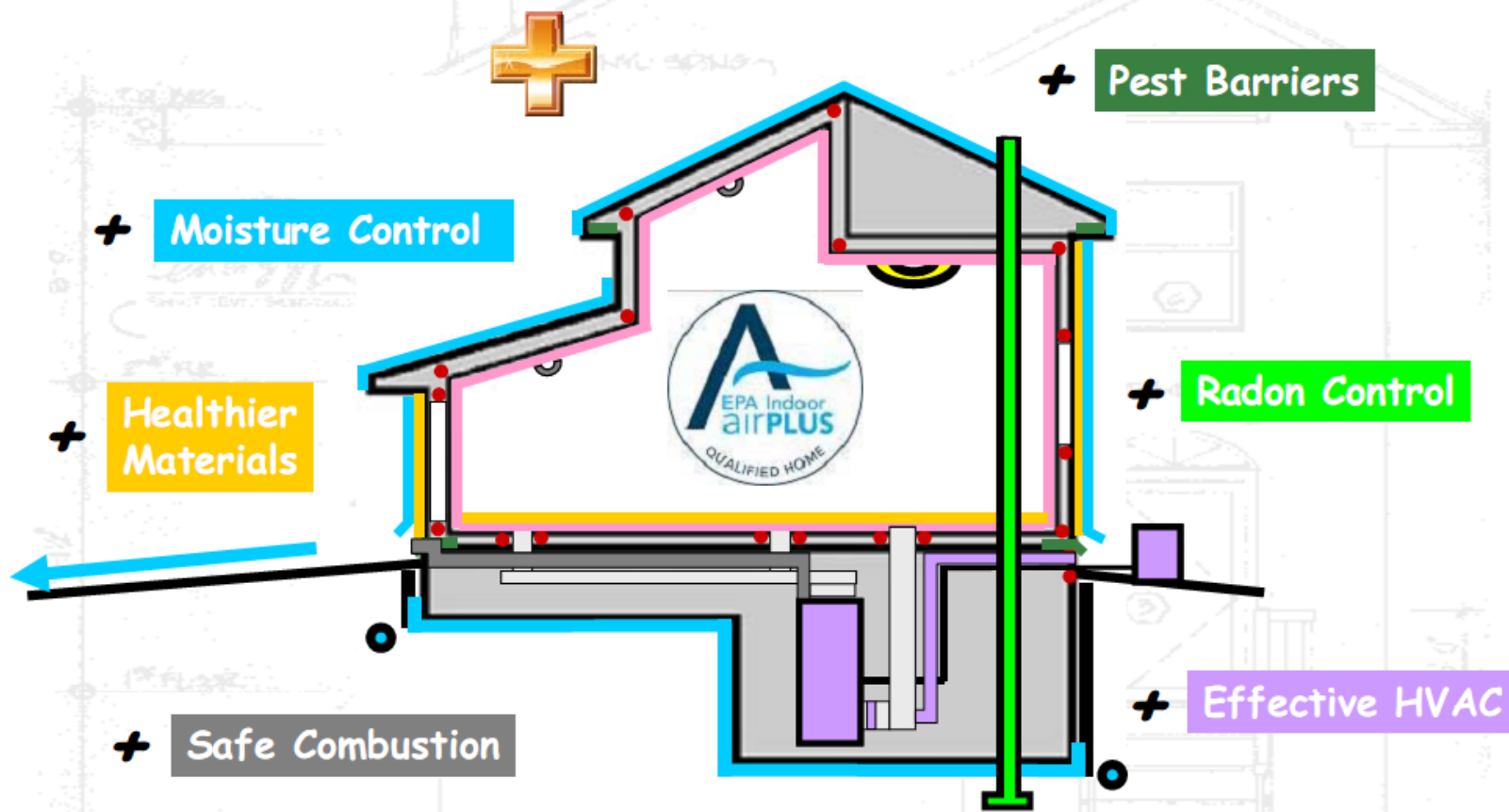
Address or Div/Lot#:		Date:		Verified by:	
City/State/Zip:				Builder	Rater
Section	Requirements (see Indoor airPLUS Construction Specifications for details)	N/A			
Moisture Control	Water-Managed Site and Foundation				
	1.1 Site & foundation drainage: sloped grade, protected drain tile, & foundation floor drains			<input type="checkbox"/>	<input type="checkbox"/>
	1.2 Capillary break below concrete slabs & in crawlspaces (Exception - see specification)			<input type="checkbox"/>	<input type="checkbox"/>
	1.3 Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)			<input type="checkbox"/>	<input type="checkbox"/>
	1.4 Basements/crawlspaces insulated & conditioned (Exceptions - see specification)			<input type="checkbox"/>	<input type="checkbox"/>
	Water-Managed Wall Assemblies				
	1.5 Continuous drainage plane behind exterior cladding, properly flashed to foundation			<input type="checkbox"/>	<input type="checkbox"/>
	1.6 Window & door openings fully flashed			<input type="checkbox"/>	<input type="checkbox"/>
	Water-Managed Roof Assemblies				
	1.7 Gutters/downspouts direct water a minimum of 5' from foundation (Except in dry climates)			<input type="checkbox"/>	<input type="checkbox"/>
	1.8 Fully flashed roof/ceiling intersections (step & kick-out flashing) & roof penetrations			<input type="checkbox"/>	<input type="checkbox"/>
	1.9 Bituminous membrane installed at valleys & penetrations (Except in dry climates)			<input type="checkbox"/>	<input type="checkbox"/>
	1.10 Ice flashing installed at eaves (Except in Climate Zones 1 - 4)			<input type="checkbox"/>	<input type="checkbox"/>
	Interior Water Management				
	1.11 Moisture-resistant materials/protective systems installed (i.e., flooring, tub/shower backing, & piping)			<input type="checkbox"/>	<input type="checkbox"/>
1.12 No vapor barriers installed on interior side of exterior walls with high condensation potential			<input type="checkbox"/>	<input type="checkbox"/>	
1.13 No wet or water-damaged materials enclosed in building assemblies			<input type="checkbox"/>	<input type="checkbox"/>	
Radon	2.1 Approved radon-resistant features installed (Exception - see specification)			<input type="checkbox"/>	<input type="checkbox"/>
	2.2 Two radon test kits & instructions/guidance for follow-up actions provided for buyer (Advisory-see specification)			<input type="checkbox"/>	<input type="checkbox"/>
Pests	3.1 Foundation joints & penetrations sealed, including air-tight sump covers			<input type="checkbox"/>	<input type="checkbox"/>
	3.2 Corrosion-proof rodent/bird screens installed at all openings that cannot be fully sealed (e.g., attic vents)			<input type="checkbox"/>	<input type="checkbox"/>
HVAC	4.1 HVAC room loads calculated, documented; system design documented; coils matched			<input type="checkbox"/>	<input type="checkbox"/>
	4.2 Duct system design documented & properly installed OR duct system tested (check box if tested) <input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
	4.3 No air handling equipment or ductwork installed in garage; continuous air barrier required in adjacent assemblies			<input type="checkbox"/>	<input type="checkbox"/>
	4.4 Rooms pressure balanced (using transfer grills or jump ducts) as required OR tested (check box if tested) <input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
	4.5 Whole house ventilation system installed to meet ASHRAE 62.2 requirements			<input type="checkbox"/>	<input type="checkbox"/>
	4.6 Local exhaust ventilation to outdoors installed for baths, kitchen, clothes dryers, central vacuum system, etc.			<input type="checkbox"/>	<input type="checkbox"/>
	4.7 Central forced-air HVAC system(s) have minimum MERV 8 filter, no filter bypass, & no ozone generators			<input type="checkbox"/>	<input type="checkbox"/>
	4.8 Additional dehumidification system(s) or central HVAC dehumidification controls installed (In warm-humid climates only)			<input type="checkbox"/>	<input type="checkbox"/>
Combustion Pollutants	Combustion Source Controls				
	5.1 Gas heat direct vented; oil heat & water heaters power vented or direct vented (Exceptions - see specifications)			<input type="checkbox"/>	<input type="checkbox"/>
	5.2 Fireplaces/heating stoves vented outdoors & meet emissions/efficiency standards/restrictions			<input type="checkbox"/>	<input type="checkbox"/>
	5.3 Certified CO alarms installed in each sleeping zone (e.g., common hallway) according to NFPA 720			<input type="checkbox"/>	<input type="checkbox"/>
Attached Garage Isolation	5.4 Smoking prohibited in common areas; outside smoking at least 25' from building openings (Multi-family homes only)			<input type="checkbox"/>	<input type="checkbox"/>
	5.5 Common walls/ceilings (house & garage) air-sealed before insulation installed; house doors gasketed & closer installed			<input type="checkbox"/>	<input type="checkbox"/>
Materials	5.6 Exhaust fan (minimum 70 cfm, rated for continuous use) installed in garage & vented to outdoors (controls optional)			<input type="checkbox"/>	<input type="checkbox"/>
	6.1 Certified low-formaldehyde pressed wood materials used (i.e., plywood, OSB, MDF, cabinetry)			<input type="checkbox"/>	<input type="checkbox"/>
	6.2 Certified low-VOC or no-VOC interior paints & finishes used			<input type="checkbox"/>	<input type="checkbox"/>
Final	6.3 Carpet, adhesives, & cushion qualify for CRI Green Label Plus or Green Label testing program			<input type="checkbox"/>	<input type="checkbox"/>
	7.1 HVAC system & ductwork verified dry, clean, & properly installed			<input type="checkbox"/>	<input type="checkbox"/>
	7.2 Home ventilated before occupancy OR initial ventilation instructions provided for buyer			<input type="checkbox"/>	<input type="checkbox"/>
	7.3 Completed checklist & other required documentation provided for buyer			<input type="checkbox"/>	<input type="checkbox"/>
Rater/Provider:		Builder:			
Company:		Company:			
Signature:		Signature:			



ENERGY STAR



All EPA Indoor airPLUS qualified homes meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally-recognized symbol for energy efficiency.



Combustion Venting

- No unvented combustion appliances allowed.
 - A carbon monoxide (CO) monitor must be installed on each floor (or unit).
 - All fireplaces and woodstoves must have doors.
 - Space and water heating equipment that involves combustion must:
 - Be designed and installed with closed combustion;
 - Be designed and installed with power-vented exhaust; OR
 - Be located in a detached utility building or open-air facility.
 - 2 Points = No fireplace or woodstove
-

Air Flow/Exhaust Requirements

Table 30: Minimum Air Flow Requirements for Continuous Ventilation Systems, in cfm

Conditioned floor area (ft ²)	Bedrooms				
	0, 1	2, 3	4, 5	6, 7	> 7
≤ 1,500	30	45	60	75	90
1,501–3,000	45	60	75	90	105
3,001–4,500	60	75	90	105	120
4,501–6,000	75	90	105	120	135
6,001–7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

Credit: ASHRAE Standard 62.2, 2007. ©American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., www.ashrae.org <<http://www.ashrae.org/>>

Kitchen Exhaust \geq 100 cfm
Bathroom Exhaust \geq 50 cfm

Directly to the outdoors

Distribution of Space Heating and Cooling

Room-by-Room Load Calculations (Manual J and Manual D)

Return Air Flow

Third-Party Performance Test

Room-by-Room Controls

Multiple Zones

(Lesson Learned – thermostat guides and set dampers in the supply vent)

Air Filtering

7.1 Good Filters: MERV \geq 8

7.2 Better Filters: MERV \geq 10

7.3 Best Filters: MERV \geq 13

Contaminant Control

8.1 Indoor Contaminant Control during Construction

Seal all ducts and vents

8.2 Indoor Contaminant Control

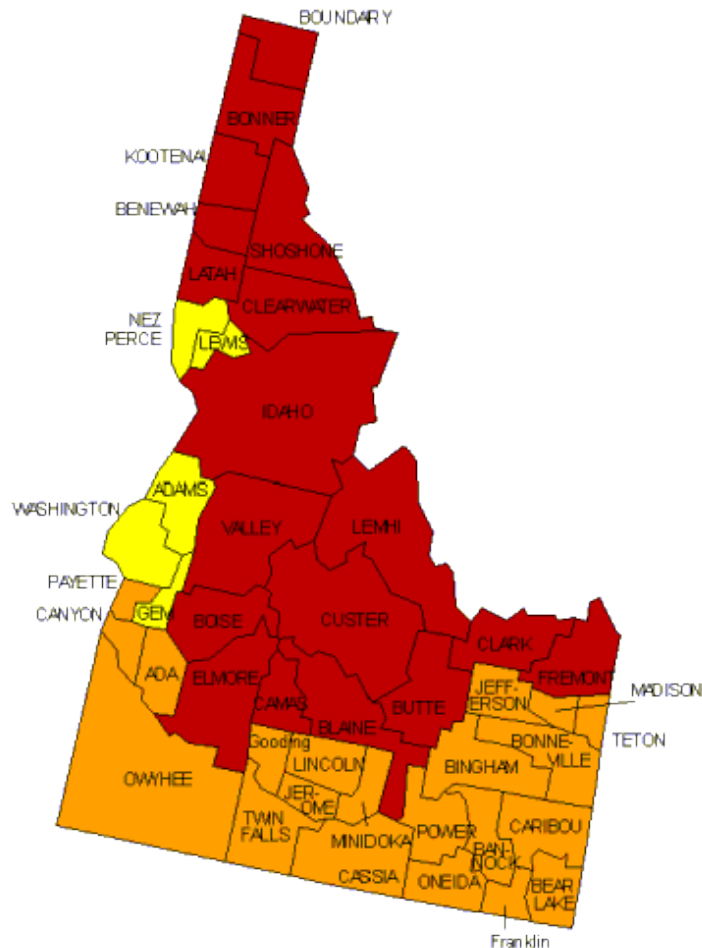
Permanent walk-off mats

Shoe storage

Central vacuum

8.3 Preoccupancy Flush for 48 Hours

Radon Protection



- **Zone 1** counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) - Highest Potential
- **Zone 2** counties have a predicted average indoor radon screening level between 2 and 4 pCi/L (orange zones) - Moderate Potential
- **Zone 3** counties have a predicted average indoor radon screening level less than 2 pCi/L (yellow zones) - Low Potential

Garage Pollutant Protection

- 10.1 NO HVAC IN GARAGE**
 - 10.2 Minimize Pollutants from Garage**
 - 10.3 Exhaust Fan in Garage**
 - 10.4 Detached Garage or No Garage**
-

Low Emission Products

Low Emission Flooring

- Carpet & Rug Institute Green Label Plus
- SCS FloorScore Certified



Additional 0.5 pt – 100% Hard Surface Flooring

Low Emission Products

Low Emissions Paints and Coatings, Adhesives and Sealants

- Comply with Green Seal Standard GS-11
- (Comply with Green Seal Standard GC-03)
- Comply with SCAQMD 1113



10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		ENVIRONMENTALLY PREFERABLE PRODUCTS	
Table 20: Standards for Low Emissions Adhesives and Sealants (meet South Coast Air Quality Management District Rule #1248)		Applicable Standard (VOC content, g/L less water)	
Architectural applications			
Indoor carpet adhesives		50	
Carpet pad adhesives		50	
Wood flooring adhesives		100	
Rubber floor adhesives		60	
Sulfur adhesives		50	
VCT and asphalt adhesives		50	
Original and point adhesives		50	
Core base adhesives		70	
Multipurpose construction adhesives		100	
Structural glazing adhesives		100	
Specialty applications			
PVC welding		1100	
CPVC welding		480	
ABS welding		325	
Plastic cement welding		240	
Adhesive primer for plastic		150	
Contact adhesive		80	
Special purpose contact adhesive		250	
Structural wood member adhesive		140	
Sheet-applied rubber lining operations		800	
Top and trim adhesive		250	
Substrate-specific applications			
Adhesives metal		50	
Plastic frames		50	
Process materials (except wood)		50	
Wood		80	
Thermoplastic		80	
Sealants			
Architectural		250	
Nonweatherable roof		300	
Roadway		250	
Single-ply roof membranes		400	
Other		400	
Sealant primers			
Architectural nonporous		250	
Architectural porous		775	
Other		750	



Strategies to Achieve LEED Platinum

Strategies to achieve LEED Platinum

- Design charrette / Sub training
 - Integrated project team meetings
 - LEED AP Homes
 - Durability plan
 - Site selection, Infill, Existing infrastructure
 - Community resources, Access to open space
 - Limit turf, most over 90% drought-tolerant plants
 - 100% stormwater on site, manage roof runoff
 - Nontoxic pest control
 - High density
 - High efficiency irrigation
 - Low-flow showerheads, faucets and toilets
 - ENERGY STAR / HERS Score / IndoorAir Plus
-

Strategies to achieve LEED Platinum

- Framing efficiencies and documentation
 - Recycled doors, trim and insulation
 - PEX piping
 - Low emission flooring, adhesives and sealants, paints and insulation
 - Local framing lumber, concrete (sometimes gypsum)
 - Waste diversion
 - No fireplaces
 - Enhanced ventilation and exhaust
 - Third-party performance testing (OSA, exhaust, supply flow rates)
 - Contaminant control during construction, walk-off mats
 - Pre-occupancy flush
 - Radon mitigation
 - Resident and building manager training, public awareness
-

Case Studies



Rosslare & Summerhill in Idaho
Falls

Cardona, Rosslare and Summerhill

Developer – Thomas Development

Architect – Glancey Rockwell

Builder – Pac West

Cardona & Rosslare – LEED Platinum

PROJECT PROFILE



CARDONA APARTMENTS
CHUBBUCK, IDAHO

15 units per acre

99.5% of construction waste diverted from landfills

48 homes available for low-income seniors

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Awareness & Education	3/3
Locations and Linkages	7/10

*Out of a possible 136 points



PROJECT PROFILE



ROSSLARE APARTMENTS
IDAHO FALLS, IDAHO

19.9 units per acre

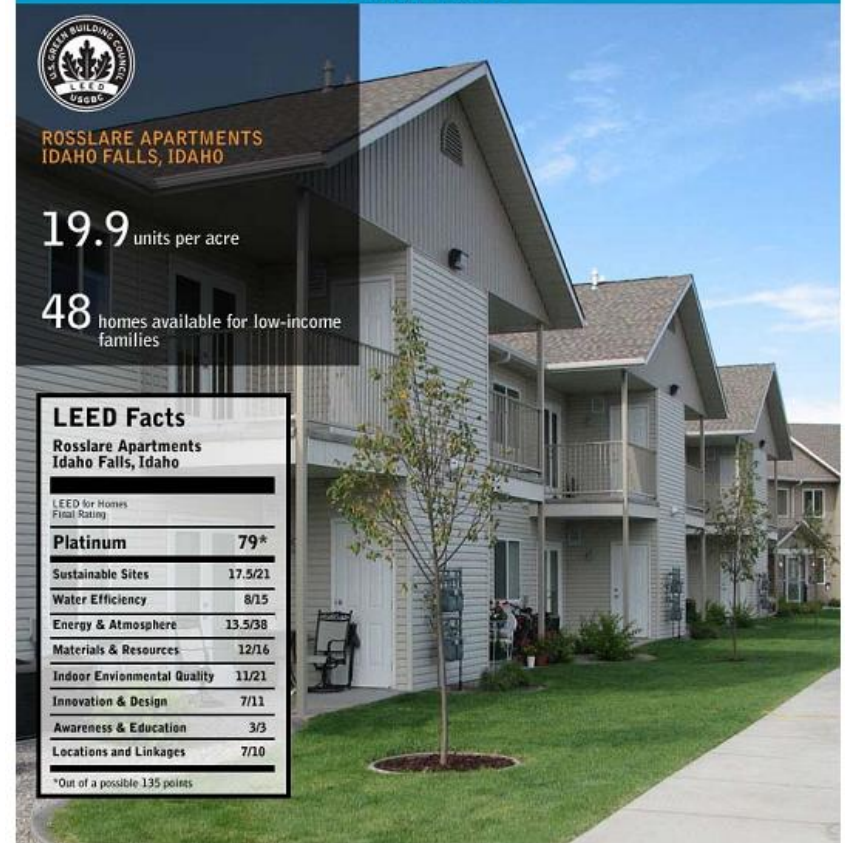
48 homes available for low-income families

LEED Facts
Rosslare Apartments
Idaho Falls, Idaho

LEED for Homes
Final Rating

Platinum	79*
Sustainable Sites	17.5/21
Water Efficiency	8/15
Energy & Atmosphere	13.5/38
Materials & Resources	12/16
Indoor Environmental Quality	11/21
Innovation & Design	7/11
Awareness & Education	3/3
Locations and Linkages	7/10

*Out of a possible 135 points



Rosslare – LEED Platinum

48-unit multifamily building in Idaho Falls

- Non-toxic pest control measures
 - SCS FloorScore hard surface flooring
 - CRI Green Label Plus carpet and pad
 - Low-VOC interior paint, primer, adhesives and sealants
 - Low-Emission insulation
 - No unvented combustion appliances
 - Carbon monoxide detector in each unit
 - No fireplace
 - Third-party performance testing of outdoor air ventilation and air flow rates in each room
 - Bath and kitchen exhaust fans exhaust directly to outdoors
 - MERV 8 air filters
 - Indoor contaminant control during construction
 - Permanent walk-off mats at each entry
 - Pre-occupancy flush for 48 hours
 - Radon-resistant construction (Zone 2)
 - No garage
-

Summerhill – LEED Platinum



Summerhill – Pervious Pavement





The Springs in McCall

The Springs

Developer – The Housing Company

Architect – CSHQA

Builder – Wright Bros.

The Springs – LEED Platinum



The Springs – LEED Platinum



The Springs – LEED Platinum



The Springs – Targeting Platinum



The Springs – Targeting Platinum



The Springs – Targeting Platinum



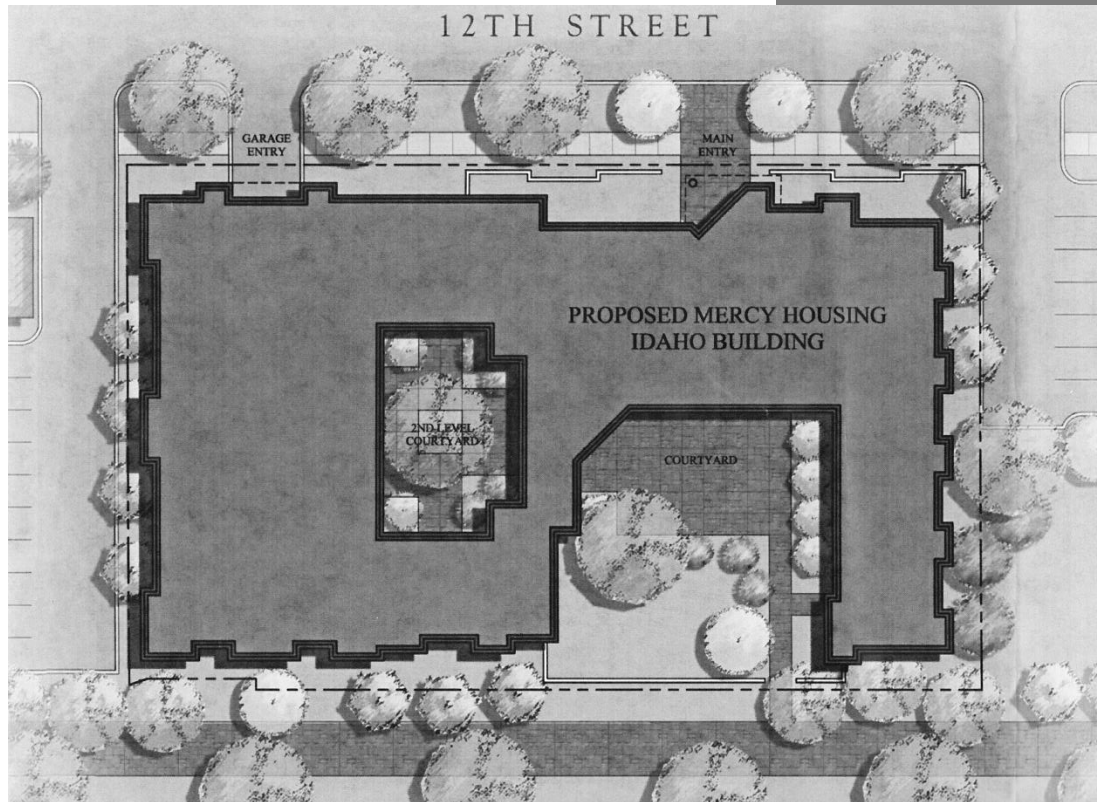
The Springs – Targeting Platinum



The Springs – Targeting Platinum

3-building multifamily project in McCall

- Non-toxic pest control measures
 - SCS FloorScore hard surface flooring
 - CRI Green Label Plus carpet and pad
 - Low-VOC interior paint, primer, adhesives and sealants
 - No unvented combustion appliances
 - Carbon monoxide detector in each unit
 - No fireplace
 - Bath and kitchen exhaust fans exhaust directly to outdoors
 - Enhanced local exhaust (continuous ventilation)
 - Mini-split air source heat pumps (20 SEER, 11.3 HSPF)
 - Permanent walk-off mats at each entry
 - Shoe removal and storage at each primary entryway
 - Pre-occupancy flush for 48 hours?
 - Radon-resistant construction (**Zone 1**)
 - No garage
-



Mercy Housing in Boise

Mercy Housing Idaho

Developer – Mercy Housing

Architect – Glancey Rockwell

Builder – Scott Hedrick

Mercy Housing – LEED Platinum

53-unit multifamily building in Boise

- Non-toxic pest control measures
- SCS FloorScore hard surface flooring
- CRI Green Label Plus carpet and pad
- Low-VOC interior paint, primer, adhesives and sealants
- Low-emission insulation
- No unvented combustion appliances
- Carbon monoxide detector in each unit
- No fireplace
- Heat Recovery Ventilator (HRV)
- Bath and kitchen exhaust fans exhaust directly to outdoors
- Enhanced local exhaust (automatic controls)
- Mini-split air source heat pumps
- MERV 10 air filters
- Permanent walk-off mats at each entry
- Pre-occupancy flush for 48 hours
- Radon-resistant construction (Zone 2)
- No HVAC in garage and minimize pollutants from garage and exhaust fan in garage



*102.5
pts!*



Valencia

Valencia

Developer – Thomas Development Co / NIHC

Architect – Andy Erstad

Builder – Kier Construction



Valencia – LEED Platinum

48-unit multifamily building in Fruitland

- Within ½ mile of over 14 community resources
- 0% turf, 75% drought-tolerant plants
- Non-toxic pest control measures
- Framing efficiencies
- SCS FloorScore hard surface flooring
- CRI Green Label Plus carpet and pad
- ZERO-VOC interior paint, and Low-VOC primer, adhesives and sealants
- Low-emission insulation
- Local lumber, concrete, gypsum, cabinets
- Very low waste – only 2.5 CY /1000 SF
- Indoor Air Plus
- Heat Recovery Ventilator (HRV)
- Permanent walk-off mats at each entry



**48 HERS
Score**

Student Housing

The G in Spokane, WA
LEED Platinum
HERS



Lessons Learned

Experience matters

Team training and coaching

Charrette – revisit lessons learned, define details

Integrated design approach

Communication

Resident training

QAP input

Idaho QAP

2009
LOW-INCOME HOUSING TAX CREDIT PROGRAM
ALLOCATION PLAN
FOR THE
STATE OF IDAHO

ALLOCATING AGENCY:
Idaho Housing and Finance Association

2009 List, max 15 pts

Final Approval by:
Idaho Housing and Finance Association
Board of Commissioners on
November 21, 2008

The Honorable C.L. "Butch" Otter, Governor, State of Idaho
on
December 22, 2008

- ☐ Energy Star appliances 1
- ☐ Developments that use 50% or more of their total lighting fixture cost (not including any engineering, installation, wiring, etc) for Energy Star rated fixtures. Total fixture cost includes both interior and exterior lighting fixtures 1
- ☐ HVAC equipment that meets Energy Star for Homes requirements, or that is in accordance with ASHRAE handbooks or equivalent 1
- ☐ Water saving shower heads 1
- ☐ Programmable thermostats 1
- ☐ Low or No VOC paints, primers, adhesives, and sealants 1
- ☐ Green label certified flooring..... 1
- ☐ Harvesting 15% of rainwater runoff from roof for landscape irrigation use..... 1
- ☐ Reusable HVAC filters..... 1
- ☐ High efficiency irrigation 1
- ☐ Inclusion of environmentally preferred products, including recycled content and locally produced within 500 miles from the site for 40% of the total materials used for construction 1
- ☐ Dual flush toilets 2
- ☐ Electric or Gas tankless water heaters 2
- ☐ Xeriscape landscaping 2
- ☐ U.35 or lower rated windows 2
- ☐ 16 SEER or higher rated HVAC system 2
- ☐ Any insulation in the walls and ceilings that provides a 20% increase over minimum code 2
- ☐ Orienting building to maximize passive solar heating/cooling 2
- ☐ Metal or rubberized roofing..... 2

Preferences

Developer – 3rd-party inspection and testing “QC”

Architect – Design charrette

Builder – Sub training and support

Residents – Health, operating costs, location

Next Steps

- Solar ready
- Adare Manor
- The Rose / Living Future




Urban Land Institute July 2015

ULI Case Studies

Sponsored by Allen Matkins
Real Estate, Attorney, Accountant

The Rose



QUICK FACTS

Location
Minneapolis, Minnesota

Project type
Multifamily rental housing

Site size
2.3 acres

Land uses
Multifamily housing, affordable housing

Keywords/special features
Mixed-income housing, sustainable development, green building, healthy place features, Living Building Challenge

Website
www.aecomm.org/properties/rose/

Project address
1920 & 1928 Portland Avenue
Minneapolis, Minnesota 55404

Developer
Aeon
901 Third Street North, Suite 150
Minneapolis, Minnesota 55401
www.aecomm.org

Codelveloper
Hope Community
Minneapolis, Minnesota

Owner
Franklin Portland Gateway Phase IV Limited Partnership
Minneapolis, Minnesota
www.aecomm.org

Architect
Meyer, Scherer & Rockcastle Ltd.
Minneapolis, Minnesota
www.mrsdcsdesign.com

PROJECT SUMMARY

The Rose is a 90-unit mixed-income apartment project, part of a multiphase redevelopment project that includes 47 affordable units and 43 market-rate units in a two-building configuration. The Rose is also an example of an ambitious effort to build sustainably, and the developer has set out to meet many of the stringent sustainability standards of the Living Building Challenge within three to five years of opening. Unlike many sustainable buildings, the Rose kept overall construction costs generally in line with comparable affordable housing projects. The Rose succeeds at balancing the aspirational requirements of green building with the need to be cost-efficient and replicable across the affordable housing industry.

The Rose is a joint development of Aeon and Hope Community and is the fourth phase of the South Quarter project that began in 2001. When complete, the overall development will add a total of 216 apartments to a formerly blighted intersection in Minneapolis. The project is the first in the South Quarter to include a relative balance between affordable and market-rate units in a mixed-income approach.

The developers also set out to build a sustainable project, and they invested time and effort in understanding the latest green building techniques and strategies. Aeon, Hope Community, architect and interior designer Meyer, Scherer & Rockcastle (MSR), contractor Weis Builders, the University of Minnesota Center for Sustainable Building Research, and sustainability consultant PLACE spent

www.uli.org/casestudies

The Rose Case Study 1

How much can we save energy and
reduce health care costs by
building green? This is what
makes a home truly *affordable*.

Thank You!

