

## RECYCLED CONTENT MATERIALS

- Carpet Tiles
- Marmoleum Flooring
- Rubber Wall Base
- Wood Wall Baseboard
- Acoustic Ceiling Tiles
- Composite Countertop Surface
- Steel Studs
- Work Stations / Cubicles
- Wood and Laminate Wall Panels
- Gypsum Wall Board



# ARTHRITIS & OSTEOPOROSIS CENTER

## NATURAL AND RENEWABLE MATERIALS

- Engineered wood products (Used as finish materials)
- Marmoleum (natural linoleum flooring)
- Bio-based plastic sign lettering
- Rubber wall base (instead of vinyl)

## RECYCLABLE MATERIALS

- All glazing
- Carpet tile
- Marmoleum flooring
- Composite surface countertops
- Gypsum wall board
- Acoustic ceiling tile
- Steel studs
- Aluminium door and window frames
- Bio-based plastic sign letters



## OTHER CONSIDERATIONS

- Use of Sun Tunnel daylighting tubes.
- High-efficiency lighting with occupancy sensors.
- High-efficiency, multi-zoned hvac system.
- Energy Star rated appliances throughout.
- Low and no VOC adhesives, materials, and finishes.
- Weather protected entryways and walk-off mats.
- High-performance, low-flow plumbing fixtures.
- Dual flush, low-flow toilets.

# BCCF HEADQUARTERS & COMMUNITY CONFERENCE CENTER

Reading, Pennsylvania

## GREEN BUILDING ELEMENTS

SEE ANNOTATED SKETCHES

ADDITIONAL ELEMENTS

Managing storm water run-off through collection & on site treatment.

High efficiency plumbing fixtures including occupancy sensors.

Commissioning of building systems.

Day lighting in 90% of all spaces.

75% of construction waste to be recycled.

Use of low-emitting materials to improve indoor air quality.

Use of FSC certified wood.

High efficiency lighting w/daylight and occupancy sensors.

Super insulated building envelope.

Outdoor connection at each floor



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DESIGNWORKS

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## SITE SELECTION AND DESIGN

- Built on a greyfield (*previously developed*) site
- Walking distance to public transit and amenities
- Site design incorporates a bio-swale to infiltrate storm water to recharge ground water and to reduce and control storm water runoff.

## BUILDING DESIGN

- High R-value insulation and high-performance windows create an air-tight, efficient envelope.
- Passive solar elements promote solar gain in winter and restrict solar gain in summer.
- Building orientation: The building has a long east-west axis to maximize solar exposure.

## ENERGY REDUCTION

- HVAC equipment is 95% efficient.
- Daylighting reduces use of artificial lighting.
- Energy efficient lighting with daylight and occupancy sensors.
- Building massing: The building geometry is designed to maximize the volume to surface area ratio.

## MATERIALS

- Rapidly renewable
- Recycled materials
- Recyclable materials
- Durable, low-maintenance interior and exterior materials.
- Natural and low or zero VOC materials

- Significant reduction of impervious surface area
- Landscaping: reduces solar heat gain and uses native and adaptive plants to reduce need for irrigation.
- High-efficiency led lighting, selected to minimize light pollution.

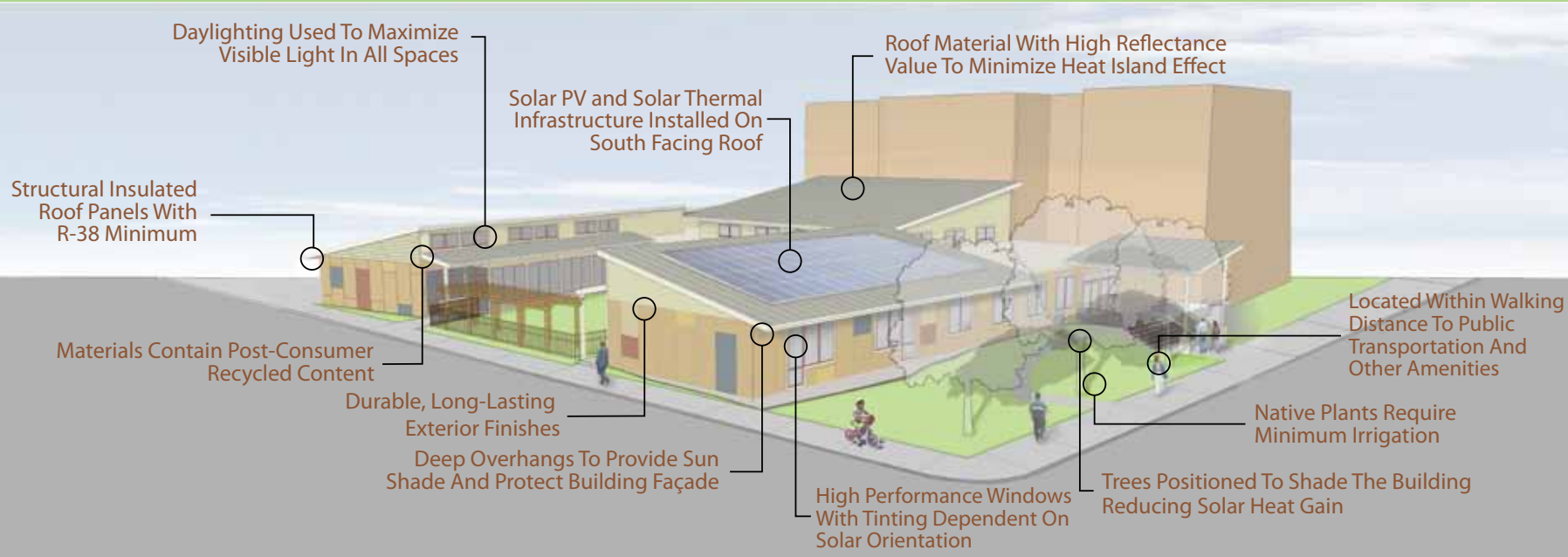


Designed to  
Achieve  
LEED SILVER  
Certification.

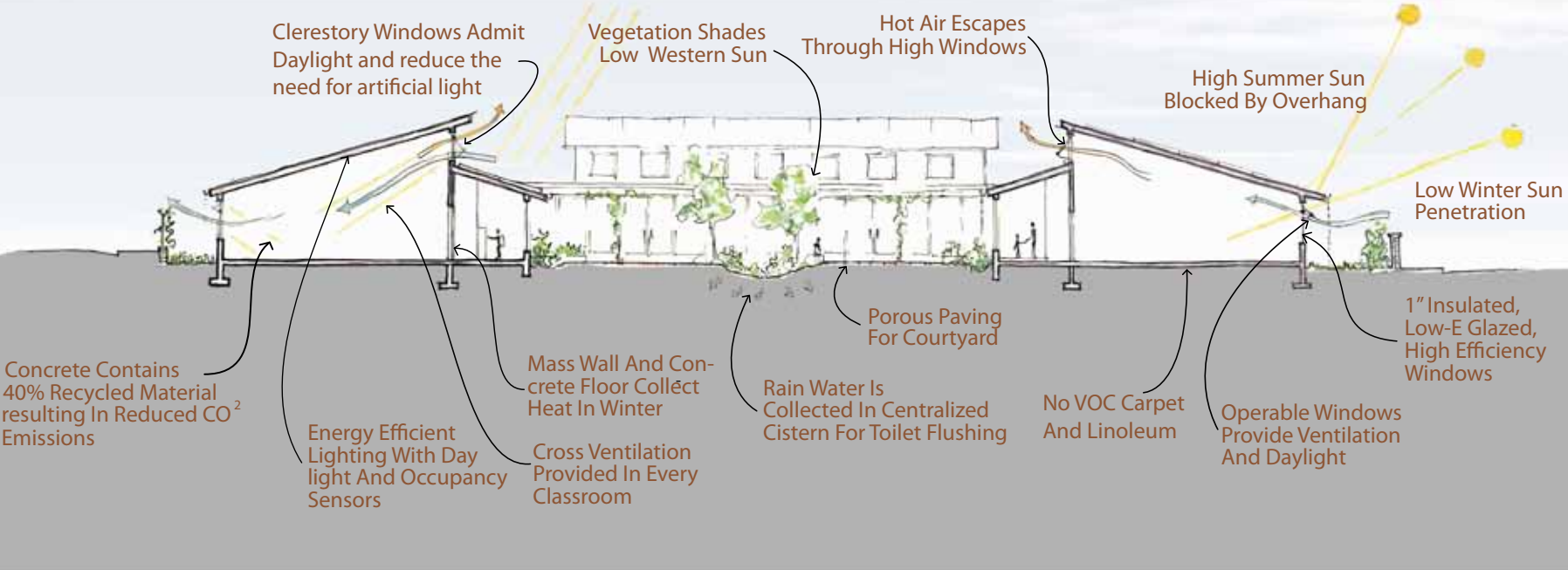
# BERKS WOMEN IN CRISIS



**ADMINISTRATIVE OFFICES  
AND TRANSITIONAL HOUSING**



# OPPORTUNITY HOUSE DAYCARE



# AND TECHNOLOGY CENTER



Designed to Achieve LEED SILVER Certification.

## PASSIVE DESIGN FEATURES

- Building oriented along east-west axis, main living spaces located along south side for natural light and winter solar heat gain.
- High-performance envelope: high r-value insulation, high-performance windows located to maximize natural light and ventilation and minimize unwanted heat gains and losses.
- Deep overhangs to provide summer sun shade and to protect the façade.
- Low-flow and efficient plumbing fixtures.
- Airlock vestibule to reduce heating and cooling losses to outside.
- Compact footprint designed for thermal efficiency.
- Embedded in the hillside to reduce northwest exposure.
- Minimal site disturbance during construction.

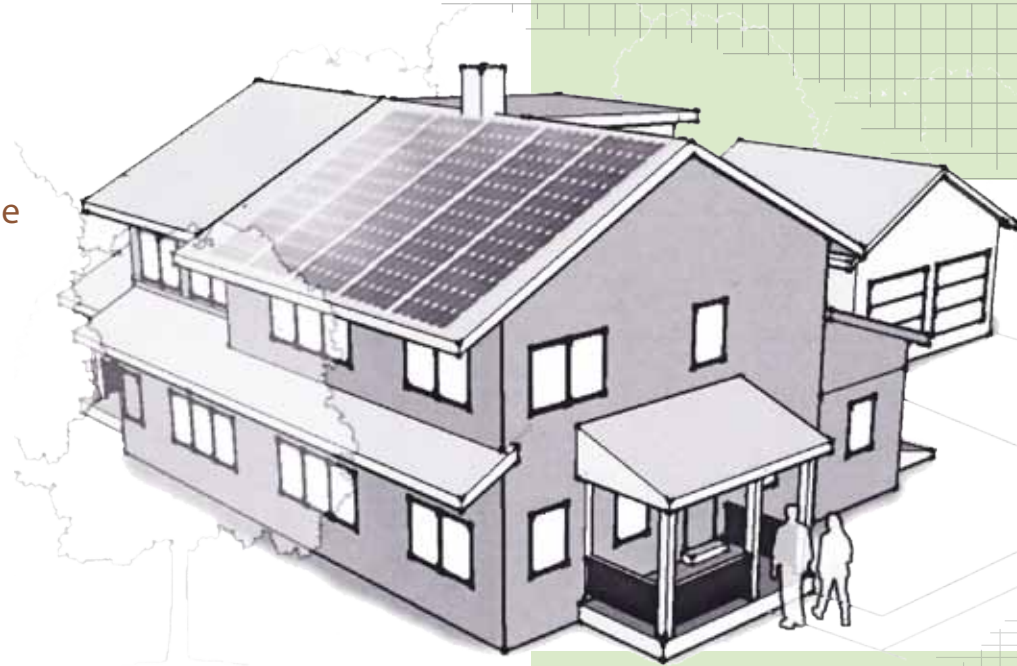
## ACTIVE FEATURES

- Solar electric (PV) system: Designed to generate a majority of the electricity demand.
- Solar thermal system: Designed to provide a majority of the residence's hot water demand.
- Energy efficient lighting and appliances.
- Masonry heater (uses high thermal mass to retain and re-radiate excess heat from a wood-fueled fire with no CO<sup>2</sup> emissions).

## MATERIALS

- Durable, low-maintenance exterior finishes.
- Low and no VOC interior finishes.
- Recycled content and recyclable materials.
- Local, regional, natural, and renewable materials throughout.

# PROPOSED SOLAR RESIDENCE



## PASSIVE DESIGN FEATURES

- Building oriented along east-west axis, main living spaces located along south side for natural light and winter solar heat gain.
- High-performance envelope: high R-value insulation, high-performance windows located to maximize natural light and ventilation and minimize unwanted heat gains and losses.
- Deep overhangs to provide summer sun shade and to protect the façade.
- Low-flow and efficient plumbing fixtures.
- Airlock vestibule reduces heating and cooling losses to outside.
- Rainwater collection and storage in cistern for landscape irrigation and toilet flushing.
- Home designed to work with existing contours to minimize site disturbance during construction.

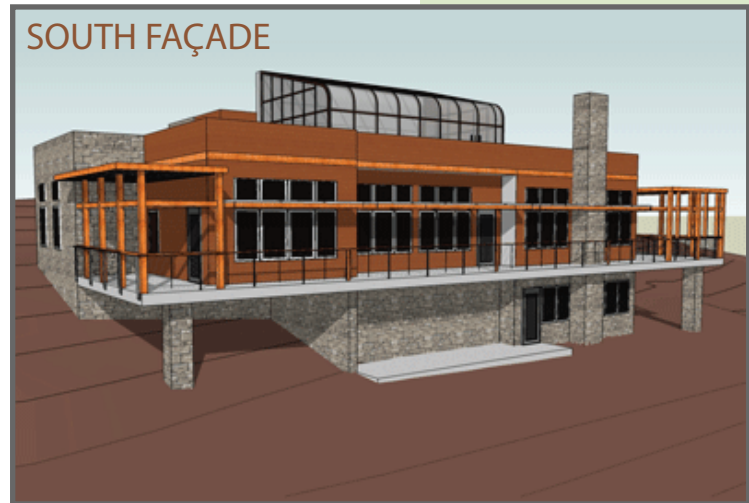
## ACTIVE FEATURES

- Solar electric (PV) system: Designed to generate the majority of the electricity demand.
- Solar thermal system: Designed to provide a majority of the residence's hot water demand.
- Ground-source (geothermal) heating and cooling.
- Energy efficient lighting and appliances, including a high-efficiency HVAC system.
- Greenhouse for food production, seed starting and overwintering.

## MATERIALS

- Durable, low-maintenance exterior finishes.
- Low and No VOC interior finishes.
- Recycled content and recyclable materials.
- Local, regional, natural, and renewable materials throughout.

# PROPOSED RESIDENCE



## PASSIVE DESIGN FEATURES

- Building oriented along east-west axis, main living spaces located along south side for natural light and winter solar heat gain.
- High-performance envelope: High R-value insulation, high-performance windows located to maximize natural light and ventilation and minimize unwanted heat gains and losses.
- Deep overhangs to provide summer sun shade and to protect the façade.

# GERNSHEIMER / WOLF RESIDENCE

- Concrete floor acts as heat sink to absorb, store, and re-radiate heat from winter sun.
- North side of house partially sheltered by an earthen bank which acts as an insulator.
- Compact, stacked design provides greater thermal efficiency and reduces the amount of materials needed to construct the house.

## MATERIALS

- Durable materials and low-maintenance finished surfaces.
- Reused large timbers salvaged from an existing barn.
- Recycled content and recyclable materials.
- Local, regional, natural, and renewable materials used throughout.
- Low and no VOC interior finishes.

